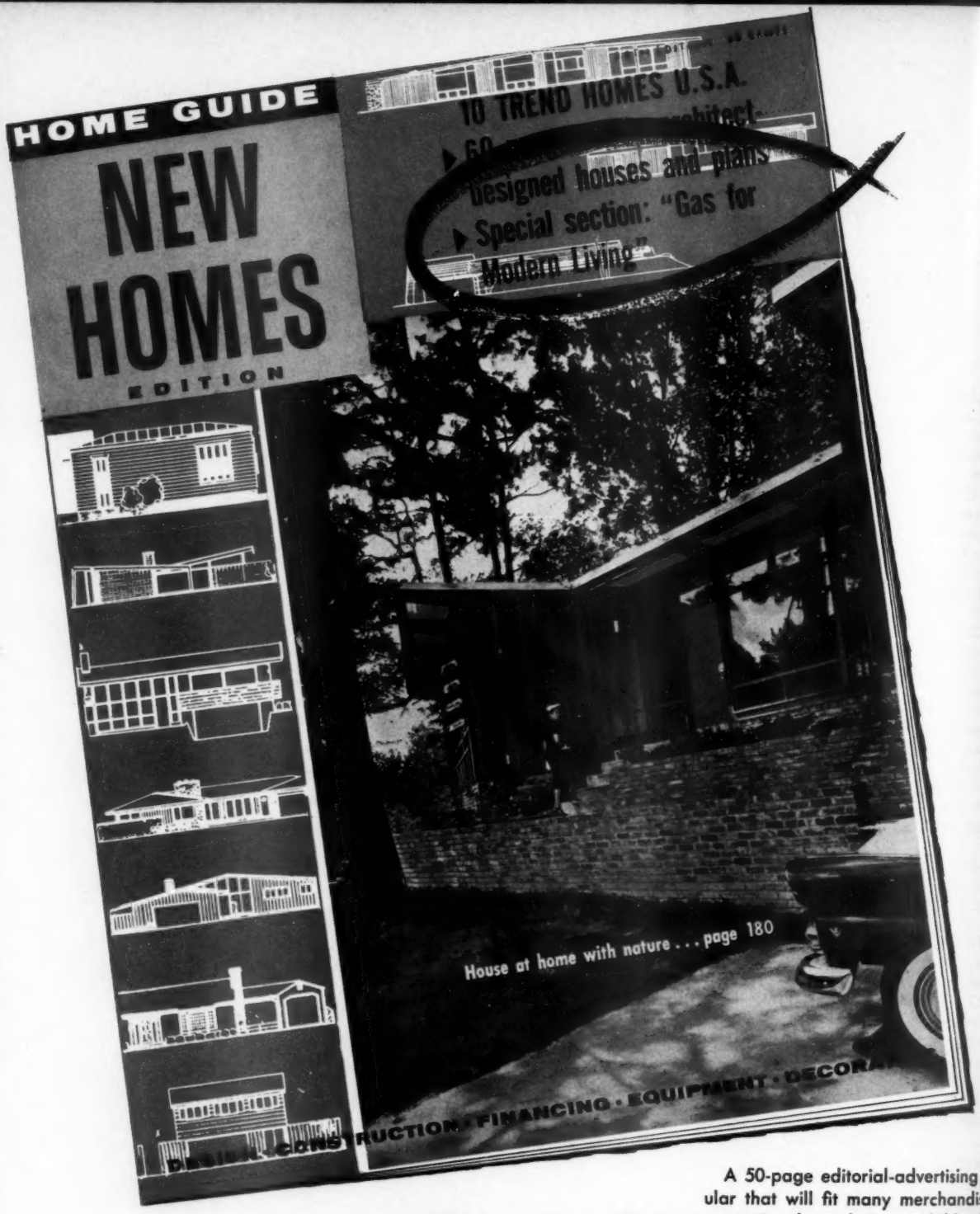
AMERICAN GAS ASSOCIATION

Monthly

AUGUST
1957



GAS SPECTACULAR

A 50-page editorial-advertising spectacular that will fit many merchandising and promotional needs is available from the A.G.A. New Freedom Gas Kitchen and Laundry Bureau. Featuring the newest residential gas appliances, this reprint from the New Homes edition of *Homes Guide Magazine* is ideal [illegible] builder-architect program. An excellent consumer piece, it should be an invaluable aid to your sales and service personnel. Copies are 29¢ each.

This huge world globe was built for the South Atlantic Gas Co. by the Chicago Bridge & Iron Co.

A. W. CONOVER, president, Equitable Gas Company, heads a slate of 30 new candidates for officers and directors to guide A. G. A. during the 1957-58 year. Mr. Conover, current first vice-president of A. G. A., is candidate for president. A report on the nominations as selected by the Nominating Committee begins on page 2. . . . Plans for the 1957 Annual Convention to be held Oct. 7-9 in St. Louis are near completion. A partial report appears on page 5 and a follow-up giving a complete listing of speakers and activities is scheduled for the September issue. . . . The gas utility and pipeline industry will spend a record-breaking $2.13 billion for new construction and expansion of present facilities throughout the United States this year. . . . For a report of that expenditure and industry expansion, turn to 9. . . . Two Chase Manhattan Bank executives (New York City) are of the opinion that the gas industry in the United States can look forward to at least 1,200 trillion cf recoverable gas. Lyon F. Terry, vice-president, and John G. Winger, petroleum economist, present their views in a paper beginning on page 10. . . . Marketing experience can actually have its pitfalls. That's the belief of J. H. Brinker, general manager, A. O. Smith Corporation, whose views are published in this issue. His paper begins on page 13.

JAMES M. BEALL
DIRECTOR PUBLIC INFORMATION

WALTER H. DYER
EDITOR

RICHARD F. MULLIGAN
ART SUPERVISOR

MARGARET A. BLOCH
NEWS EDITOR

EDITORIAL OFFICES:
AMERICAN GAS ASSOCIATION
420 LEXINGTON AVE., NEW YORK 17, N.Y.

CONTENTS FOR JULY-AUGUST 1957

FEATURES

SECTIONS

DEPARTMENTS

THIS MONTHLY IS INDEXED BY THE INDUSTRIAL ARTS INDEX

VOL. 39 NOS. 7 AND 8

• Subscription $3.00 a year - Published eleven times a year by the American Gas Association, Inc. Publication Office, 73 Main Street, Brattleboro, Vt. Publication is monthly except July and August which is a bi-monthly issue. Address communications to 420 Lexington Ave., New York 17, N. Y., including all manuscript copy for publication. The Association does not hold itself responsible for statements and opinions contained in papers and discussions appearing herein. Entered as Second Class Matter at the Post Office at Brattleboro, Vermont, Feb. 10th, 1922, under the Act of March 3, 1879. Cable addresses: American Gas Association, "Amerigas, New York"; American Gas Association Testing Laboratories, "Amerigaslab, Cleveland."

For vice-presidents ▸

ROBERT W. OTTO

For directors

PHILIP E. BECKJ

J. THEODORE WOLFE

H. HANSELL HALLE

For president

A. W. CONOVER

VINCENT T. MILES

For treasurer ▸

JOHN C. PETERSO

A.G.A. nominates for 1957-1958

SHELDON COLEMAN

CLIFFORD V. COONS

R. E. CRAWFORD

ROBERT E. GINNA

CHESTER L. MAY

S. H. NICHOLS

ED PARKES

JOHN C. PARROTT

EDWARD H. SMOKER

HENRY TUTTLE

S. D. WHITEMAN

D. K. YORATH

The General Nominating Committee of the American Gas Association has completed its selection of officers and directors for the coming year. During the Annual Convention to be held October 7-9 in St. Louis, Mo., delegates will vote on this slate of officers and directors.

The constitution and by-laws of the Association, in section 2, article X, provide that any 50 individual company members may make additional nominations of Section officers by placing their names in the hands of the managing director not later than August 1.

An effort was made to appoint new directors and reappoint current directors on a geographic basis so that attitudes and interests as they vary within those areas may be considered by the Association's Board. Directors were selected who would bring to the Board representation from all segments of the gas utility industry—large, medium and small companies; companies serving manufactured, natural and mixed gas; holding companies and appliance manufacturers.

The Nominating Committee, elected at the 1956 A. G. A. Annual Convention in Atlantic City, includes the following:

Howard B. Noyes (chairman), senior vice-president, Washington Gas Light Co., Washington, D. C.; B. C. Adams, chairman of the board, The Gas Service Co., Kansas City, Mo.; A. M. Beebee, chairman of the board, Rochester Gas and Electric Corp., Rochester, N. Y.; J. H. Collins Sr., general superintendent, gas department, New Orleans Public Service Inc., New Orleans, La.; Wendell C. Davis, president, Cribben & Sexton Co., Chicago, Ill.; Roy E. Jones, president, North Shore Gas Co., Waukegan, Ill.; James S. Moulton, vice-president and executive engineer, Pacific Gas and Electric Co., San Francisco, Calif.; R. J. Rutherford, president, Worcester Gas Light Co., Worcester, Mass.; and C. W. Smith, president, Montana-Dakota Utilities Co., Minneapolis, Minn.

Harold S. Walker Jr., A. G. A. secretary, was secretary of the General Nominating Committee.

(Continued on next page)

For chairmen

D. W. PETERSON
Accounting Section

JOHN H. WIMBERLY
General Management Section

ROY E. WRIGHT
Industrial and Commercial Gas Section

V. F. BITTNER
Operating Section

A. G. BUF
Residential Gas Section

For vice-chairmen

J. GORDON ROSS
Accounting Section

MARVIN CHANDLER
General Management Section

F. T. BROOKS
Industrial and Commercial Gas Section

H. C. JONES
Operating Section

J. T. INNIS
Operating Section

THOMAS H. EVANS
Residential Gas Section

The Committee was unanimous in its selection of these nominees. Therefore, in accordance with the constitution and by-laws of the Association, the following list of nominations is proposed to the membership:

For president—A. W. CONOVER, president, Equitable Gas Co., Pittsburgh, Pa.

For first vice-president—ROBERT W. OTTO, chairman of the board, Laclede Gas Co., St. Louis, Mo.

For second vice-president—J. THEODORE WOLFE, president, Baltimore Gas and Electric Co., Baltimore, Md.

For treasurer—VINCENT T. MILES, treasurer, Long Island Lighting Co., Mineola, N. Y.

C. H. Zachry, president, Southern Union Gas Co., Dallas, Texas, becomes a director upon completion of his present term as Association president.

Newly nominated and re-nominated directors are:

*PHILIP E. BECKMAN, vice-president in charge of gas operations, Pacific Gas and Electric Co., San Francisco, Calif.

SHELDON COLEMAN, president, The Coleman Co., Inc., Wichita, Kan.

CLIFFORD V. COONS, executive vice-president, Rheem Manufacturing Co., New York, N. Y.

*R. E. CRAWFORD, president, Minnesota Valley Natural Gas Co., Minneapolis, Minn.

ROBERT E. GINNA, president, Rochester Gas and Electric Corp., Rochester, N. Y.

H. HANSELL HILLYER, chairman of the board, president and general manager, South Atlantic Gas Co., Savannah, Ga.

*CHESTER L. MAY, senior vice-president, Lone Star Gas Co., Dallas, Texas.

S. H. NICHOLS, president, Iroquois Gas Corp., Buffalo, N. Y.

*ED PARKES, president, United Gas Pipe Line Co., Shreveport, La.

*JOHN C. PARROTT, president, Roanoke Gas Co., Roanoke, Va.

*JOHN C. PETERSON, president, The Manufacturers Light and Heat Co., Pittsburgh, Pa.

*EDWARD H. SMOKER, president, The United Gas Improvement Co., Philadelphia, Pa.

HENRY TUTTLE, president, Michigan Consolidated Gas Co., Detroit, Mich.

S. D. WHITEMAN, president, Kansas-Nebraska Natural Gas Co., Hastings, Neb.

*D. K. YORATH, president, Northwestern Utilities, Ltd., Edmonton, Alberta, Canada.

ACCOUNTING SECTION

For chairman—D. W. PETERSON, secretary and treasurer, Minneapolis Gas Co., Minneapolis, Minn.

For vice-chairman—J. GORDON ROSS, manager of service and customer relations, Rochester Gas and Electric Corp., Rochester, N. Y.

GENERAL MANAGEMENT SECTION

For chairman—JOHN H. WIMBERLY, president, Houston Natural Gas Corp., Houston, Texas.

* Renominated.

(Continued on page 42)

Convention plans near completion

A cast of eminent speakers will address delegates at the Annual Convention of the American Gas Association Oct. 7-9 in St. Louis. Robert W. Otto, General Convention Committee chairman, and chairman of the board, Laclede Gas Company, St. Louis, said plans for this 39th meeting promise to make it a highly successful event.

Mr. Otto, also second vice-president of A. G. A., announced that in addition to speakers from the gas industry, the committee is arranging for three nationally prominent men from outside the industry to address the General Sessions. Two have been named and a third is yet to be selected. The two are James F. Oates Jr., president and chief executive officer, Equitable Life Assurance Society, and James J. Healy, associate professor of industrial relations, Graduate School of Business Administration, Harvard University.

Mr. Oates, who until his recent appointment was chairman of the board of The Peoples Gas Light and Coke Company, Chicago, will appropriately take a look at the gas industry in retrospect. Mr. Healy will discuss labor-management relations, and the third speaker will talk on *Merchandising and Market Research in Today's Economy.*

Also addressing the General Sessions will be the presidents of the American Gas Association, the Gas Appliance Manufacturers Association, and the Independent Natural Gas Association of America. They are, respectively, C. H. Zachry, president, Southern Union Gas Company, Dallas, Texas; Julius Klein, president, Caloric Appliance Corporation, Philadelphia; and J. J. Hedrick, president, Natural Gas Pipeline Company of America, Chicago.

A highlight of the convention will be the final general luncheon on Wednesday, Oct. 9, in the Gold Room of the Sheraton-Jefferson Hotel. Planned around a "shoulders to the wheel" theme, the meeting will be pointed to the future—not the past. Delegates and speakers will join to determine what steps may be taken to help the gas industry continue its expansion in the future.

Robert W. Otto, chairman, Laclede Gas Co., is chairman, General Convention Committee

R. J. Vandagriff, Laclede Gas, is chairman of the Convention Entertainment Committee

Four outstanding speakers representing the fields of transmission, distribution, production, and manufacturing, will address the luncheon.

General Sessions will be held at 10 a.m. in the Opera House of Kiel Auditorium, each day of the convention. Following a report Monday by the Association treasurer, Vincent T. Miles, treasurer, Long Island Lighting Company, Mr. Zachry will deliver his address. His talk will be followed by the election of next year's officers.

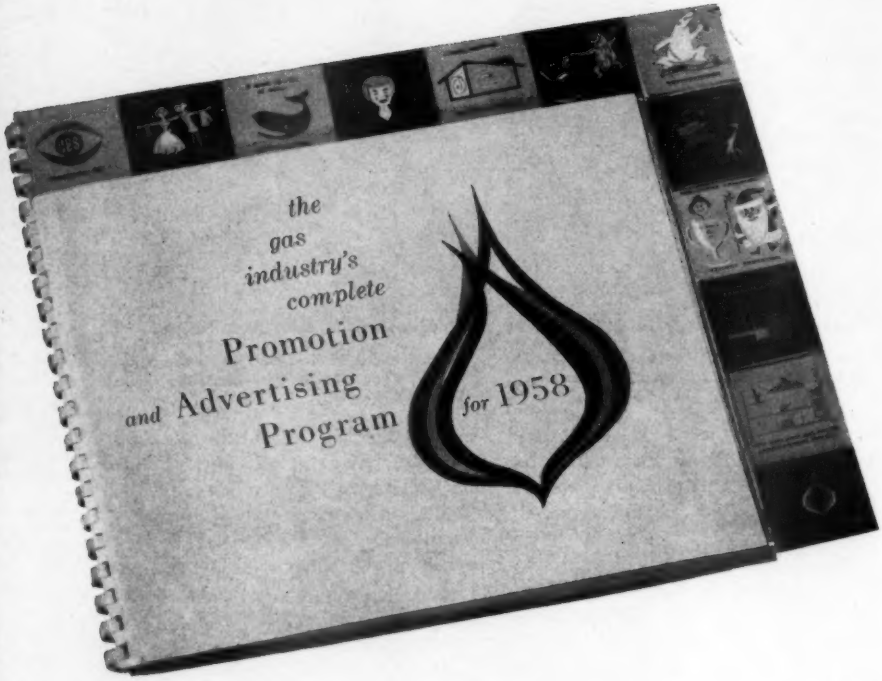
Mr. Klein will address Tuesday's General Session and Mr. Hedrick will be a General Session speaker Wednesday.

During Tuesday's session, the American Gas Association's Distinguished Service Award will be presented.

Members of the General Convention Committee assisting Mr. Otto are: R. R. Blackburn, senior vice-president, Southern California Gas Co.; Edward G. Boyer, manager, gas operations, Philadelphia Electric Co.; Cecil M. Dunn, president, Magic Chef, Inc.; Nathan H. Gellert Jr., president, Spokane Natural Gas Co.; T. H. Kendall, president, South Jersey Gas Co.; Howard B. Noyes, senior vice-president, Washington Gas Light Co.; H. Vinton Potter, vice-president, Oklahoma Natural Gas Co.; Robb Quinby, vice-president, The Brooklyn Union Gas Co.; James A. Rodgers, president, White-Rodgers Electric Co.; Charles G. Simpson, vice-president and general manager, Philadelphia Gas Works Division, The United Gas Improvement Co.; R. J. Vandagriff, vice-president in charge of sales, Laclede Gas Co.; and Harold S. Walker Jr., convention manager, and secretary, American Gas Association.

The Convention Entertainment Committee is headed by R. J. Vandagriff as chairman. Members are: Fred D. Bradley, assistant treasurer and purchasing agent, Southern Union Gas Co.; Thomas H. Evans, vice-president in charge of sales, Equitable Gas Co.; Raymond W. Fenton, manager of advertising, The Peoples Gas Light and Coke Co.; M. J. Harper, vice-president, Rockwell Manu-

(Continued on page 42)



Young mothers, purchasers of [illegible] dryers, are dryer display's [illegible]

1958 displays feature light and animation

The 1958 Promotion and Advertising Plan Book, offering dramatic, new sales devices never before used by the gas industry, goes into the mail early in September to all member gas companies and manufacturers. The General Promotional Planning Committee is confident that the book will break the record set by 1957's award-winning Plan Book.

That record—the largest number of utilities and manufacturers ever to participate in gas industry promotion—was brought about by detailed year-ahead planning of all campaigns. The result was a tremendous increase in industry-wide promotion and coordination.

The latest in motion and light animation is featured in the colorful "appliance-selling" displays for 1958. The displays are available, due to A. G. A.

Book ptember, offers sales devices never before used in gas industry

...umorous touch aids gas incinerator display. Timing for the promotion is optional

Gas househeating display utilizes flashing light behind new home. Timing is optional

Gas water heater timing is set for January through March and August through October

mass purchases, at a fraction of the cost that would be required to design and produce them locally.

Available for the first time in 1958 will be a colorful **air conditioning** display featuring light "motion."

Display service ready

Available again this year is the year-around display service. This includes one each of seven displays featured in the 1958 Plan Book: clothes dryer, water heater, spring range, incinerator, house heating, Old Stove Round Up, and holiday. These displays are available as a package from the A. G. A. Promotion Bureau for use by gas companies on their floors and for distribution to dealers.

The **gas dryer** display is aimed at the "young moderns"—the young mothers who account for most dryer purchases. Campaign timing is set for January through March and August through October. The campaign's theme will be: "ONLY GAS dries so fast . . . costs so little!"

The display features light motion. The gas flame flashes on and off to catch the customer's eye.

The **gas water heater** display has a humorous appeal that will tell your sales story quickly and effectively. The campaign theme is: "Gas heats water faster . . . costs less too!" Timing is set for January through March and August through October.

The **spring range** display is designed to bring life to every gas range sales floor. It features Julia Meade in full color, and spells out in graphic fashion both the controllability and the feature story of today's automatic gas range. The panels on the right light up alternately, dramatizing the automatic top burner heat control, fresh air oven, and smokeless broiler.

The theme for the spring range campaign is "AUTOMATICALLY YOURS . . . perfect control when you're cooking with GAS!" The timing is set for April and May.

Flashing light utilized

The **gas house heating** display utilizes a flashing light behind a modern home. The background of the display is self-supporting and is three-dimensional, lending depth to the house and banners.

The first gas air conditioning display offered points up the advantage of having year round comfort conditioning in the home

The spring range display dramatizes the controllability of the modern automatic gas range. Timing has been set for April, May

The Holiday display is designed to promote a "White Christmas" with a lasting gift—the purchase of an automatic gas appliance

Its theme: "For carefree comfort . . . heat with gas . . . so clean . . . so automatic . . . so convenient." Timing is optional.

The **air conditioning** display theme is: "Gas heats best in winter . . . cools best in summer." Featuring light motion and full color, customers will be sure to see the warm yellow light flashing, "Gas heats best in winter," and the cool green light flashing, "Gas cools best in summer." Timing is optional.

The **gas incinerator** display is humorous and effective, and can be placed either on the incinerator or on the sales floor. Its theme is: "Only gas gives odor free—smoke free incineration!" Timing is optional.

The **gas refrigerator** campaign theme is: "The only completely modern refrigerator—the gas refrigerator. Only gas gives all four—automatic ice server, automatic defrosting, ten-year warranty, no moving parts." Light motion and color is used in the display backed by a hard-sell message that ties in with A. G. A. national advertising. Timing is set for year-round promotion.

Top gas promotion

The **Old Stove Round Up** has been and continues to be the strongest merchandising vehicle in the gas industry. The 1958 display (not appearing in this issue but soon to be available) will explain exactly how the new automatic top burner heat control works, and of the advantages to the housewife. The theme for the 1958 campaign: "It's Old Stove Round Up Time!" Timing is for September, October, and November.

The **Holiday** display dramatically promotes the idea in the mind of the customer of making it a "White Christmas" by giving a lasting gift—an automatic gas appliance. The theme: "Gifts that keep on giving . . . give her an automatic gas appliance for Christmas." The Holiday display features ranges, refrigerators, dryers, and water heaters. Timing is set for November and December.

The Mrs. America Contest also will have a display for 1958 (not available at press time) which will identify gas with the modern homemaker. Timing for the promotion is year-round.

The price on each of these 1958 displays (f.o.b. Chicago) is: Water heater, $5.75; dryer, $5.60; spring range, $7.20; house heating, $5.70; incinerator, $5.10; Holiday, $6.10; and air conditioning, $8.00.

GAS UTILITY AND PIPELINE CONSTRUCTION EXPENDITURES, BY TYPE OF GAS AND BY PLANT FUNCTION, 1956-1960

(Millions)

OF GAS AND PLANT FUNCTION	ACTUAL '55	FORECAST '57	1958	1959	1960	TOTAL FORECAST 1957-1960	ACTUAL TOTAL 1953-1956
ural Gas—Total	$1,468	$2,053	$1,918	$2,200	$2,255	$8,426	$4,913
roduction and Other Storage	179	372	241	199	184	996	593
ransmission	702	1,025	830	1,077	956	3,888	2,351
nderground Storage	50	54	67	82	149	352	196
istribution	467	499	692	737	835	2,763	1,556
eneral	70	103	88	105	131	427	217
Other Types of Gas—Total	84	75	59	65	80	279	389
roduction and Storage	9	8	6	8	11	33	61
ransmission	2	3	2	2	8	15	20
istribution	67	61	47	51	56	215	284
eneral	6	3	4	4	5	16	24
al Industry—Total	1,552	2,128	1,977	2,265	2,335	8,705	5,302
roduction and Other Storage	188	380	247	207	195	1,029	654
ransmission	704	1,028	832	1,079	964	3,903	2,371
nderground Storage	50	54	67	82	149	352	196
istribution	534	560	739	788	891	2,978	1,840
eneral	76	106	92	109	136	443	241

1957 construction $2.3 billion

The gas utility and pipeline industry in the United States will spend a record breaking $2.13 billion for new construction and expansion of present facilities during 1957. This represents the first time that such expenditures have attained this level, surpassing the previous peak of $1.55 billion spent in 1956.

During the four years 1957-1960, it is anticipated that total construction expenditures will reach $8.7 billion, substantially in excess of the $5.3 billion spent during 1953-1956, the most recent comparable four year period.

These totals for the future assume a continuation of the current levels of business and industrial activity, a continuation of the gradual inflation which has characterized the nation's post-war economy, and continued increases in the demand for gas by all types of consumers.

The net increase in miles of main of the industry during 1956 aggregated 28,500 miles. Of this total, 7,900 miles represented transmission facilities, 1,840 miles were attributable to expansion of field and gathering networks by gas companies, while the increase in distribution mains for local service aggregated 18,710 miles. At the end of 1956 the total miles of main operated by gas utilities and pipelines amounted to almost 524,000.

About 97 per cent of the industry's estimated construction expenditures during the next four years will be spent for natural gas facilities. Four year expenditures for natural gas transmission will aggregate $3.89 billion, compared to $2.35 billion spent during 1953-1956. Natural gas distribution facilities will require an expenditure of $2.76 billion between 1957 and 1960, up from $1.56 billion in the most recent four year historical period.

During recent years the industry has been adding approximately one million customers annually and exceeded this amount during 1956 in spite of less housing activity. The impact on new customer additions of curtailed housing during 1957 is expected to be minimized by customer increases which will result from the introduction of natural gas, with its greatly improved customer acceptance, in the Pacific Northwest.

In addition, continued industry expansion programs are expected to reduce the impact of gas heating restrictions in those areas where such limitations still

(Continued on page 33)

Sees 1,200 trillion cf U.S. recoverable gas

By: LYON F. TERRY, left, vice-president, and JOHN G. WINGER, petroleum economist, The Chase Manhattan Bank, New York City

With the recent completion of the pipeline to the Pacific Northwest, the American gas industry has rounded out a vast grid of pipelines serving natural gas to practically all of the important fuel consuming areas of the United States. And since 99 per cent of all gas consumers now depend upon natural gas, the adequacy of the future supply is vital to the whole country.

Natural gas is closely associated with crude oil. Both of these natural resources were generated by the same geologic processes, occur in the same or similar underground reservoirs and are discovered by common exploratory efforts. Once produced, they become competitive fuels. Hence, any forecast of the growth and the supply of the gas industry may well be carried out in conjunction with similar studies of the petroleum industry. This we have done by collaborating in studies just published by The Chase Manhattan Bank entitled "Future Growth of the World Petroleum Industry"[a] and "Future Growth of the West Coast Petroleum Industry."[b]

Before we can determine the probable future growth patterns of natural gas and oil we must know what the nation's over-all energy requirements are likely to be. And the volume of energy needed will depend upon the further enlargement of our population and the amount of economic activity associated with such growth. To assure workable conclusions it seems prudent to limit our analysis to the next ten years.

A study of several estimates from both public and private sources indicates the nation's population may increase from 168 million in 1956 to 197 million by 1966. That would represent an average annual increment of 1.6 per cent. Figure 1 traces the growth of our population since 1920 and includes the projection to 1966.

The passage of time and the forward march of technology have led to steady improvement in the nation's standard of living. Since there is no evidence that this progress will not continue, it is reasonable to assume that economic activity will increase, as it has in the past, at a rate somewhat faster than population growth.

In the postwar period energy consumption in the United States has expanded at an average rate of 3.3 per cent a year. This growth stems both

TABLE 1

SOURCES OF ENERGY SUPPLY IN U. S.

	1946	1956	1966	Change 1966 From 1956
	Quadrillion Btu			Per Cent
Natural Gas	4.1	9.9	15.6	+57.6
Coal	14.5	12.0	13.8	+15.0
Water Power	1.4	1.8	1.8	0.0
Petroleum	10.5	18.4	30.1	+63.6
Total Energy	30.5	42.1	61.3	+45.6

TABLE 2

SUMMARY OF DEMAND AND SUPPLY

	1946	1956	1966	Change 1966 From 1956
	Trillion Cubic Feet			Per Cent
Marketed Domestic Production*	4.2	10.1	15.2	+50.5
Net Imports	.0	.0	.8	—
Total Demand	4.2	10.1	16.0	+58.4
Net U. S. Production†	4.9	10.8	16.3	+50.9

* From Bureau of Mines, production minus repressuring, vented and waste.
† A. G. A. Reserves Committee, adjusted to equal net withdrawals from reserves.

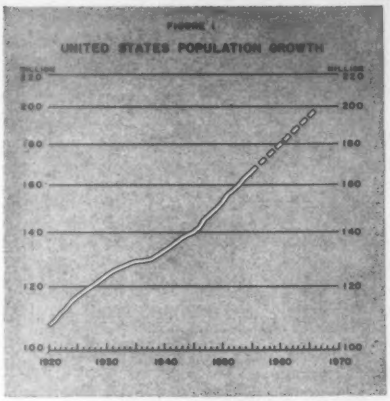
from increasing population and expanding per capita use. An even greater rate of growth would have taken place had it not been for the railroads' conversion from steam to the vastly more efficient diesel locomotive. Demonstrated in Figure 2 is the impact of this shift. Despite the fact that there was no appreciable change in their over-all traffic, railroads in 1956 consumed less than one-fourth the volume of raw energy they were using ten years earlier. And also in 1956, the railroads accounted for only 2 per cent of the national energy consumption compared with 12 per cent a decade before.

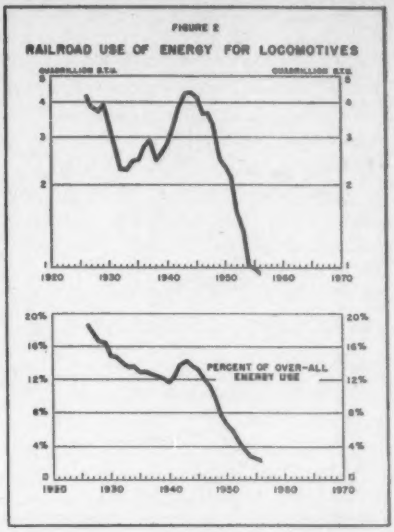
Partly obscured by the railroad conversion were strong growth trends in the utilization of energy in other sectors of the economy. After adjustment for the railroad component, there emerged a growth rate for all other energy use which averaged 4.3 per cent per annum during the postwar period. The locomotive changeover program is now nearing completion. And, while there doubtless will continue to be further efficiency improvement in the utilization of energy, there is in sight nothing which approaches the magnitude of the locomotive conversion. So it appears likely that over-all energy consumption in the near future may grow at an accelerated pace.

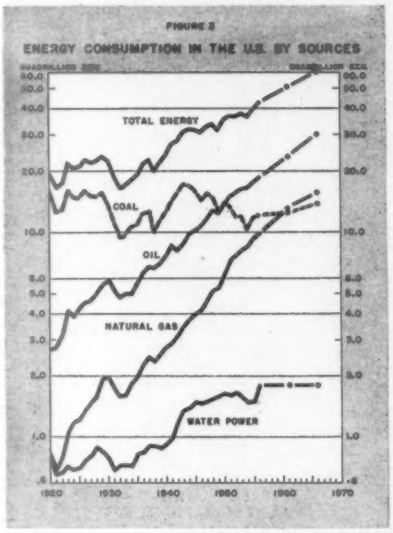
It is our view that growing population, expanding economic activity, a rising standard of living, and greater mechanization will support a growth in energy use averaging 3.8 per cent a year for the next decade. By 1966 it is expected that the nation's energy consumption will rise to 61 quadrillion Btu from the 1956 level of 42 quadrillion Btu. The total energy requirements are expected to be supplied from four major sources—petroleum, natural gas, coal and water power. No allowance is made for nuclear energy, because it is believed that what may be provided by this source in the period we are considering is well within the margin of error in over-all demand projections.

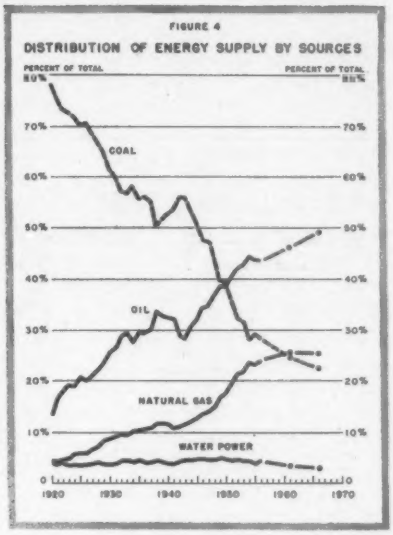
We have made separate studies for each of the four major energy sources and the volumes shown in Table 1 and Figure 3 represent, in our opinion, plausible forecasts.

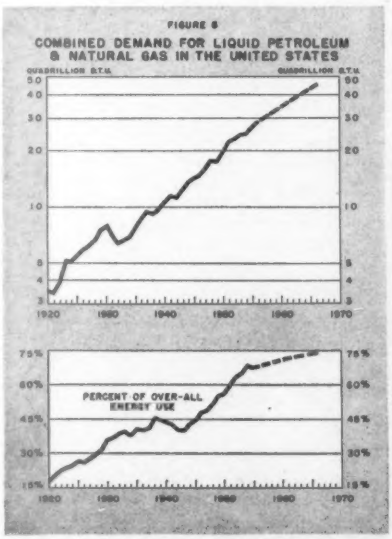
Figure 4 shows the relative contribution of each energy source to the total, demonstrating forcefully the fall of coal from a major to a minor position.

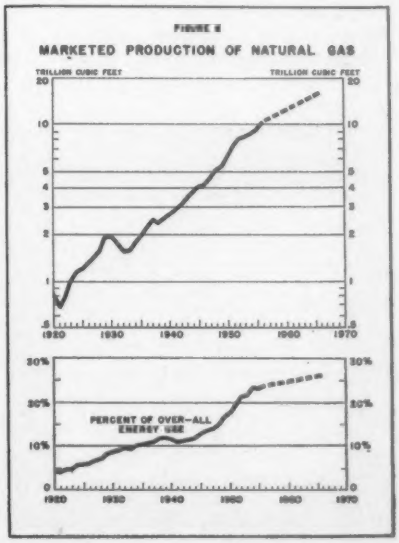


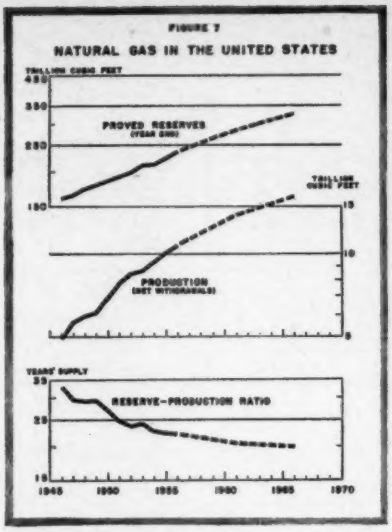


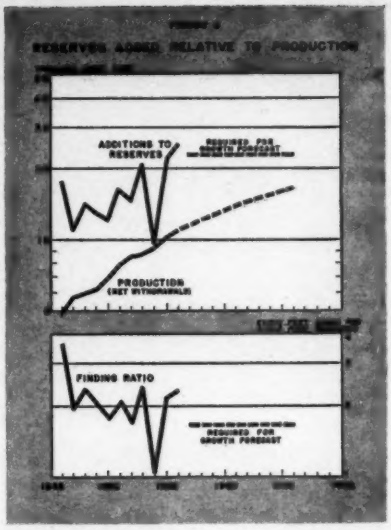


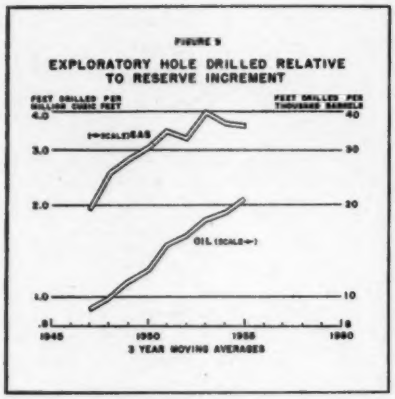


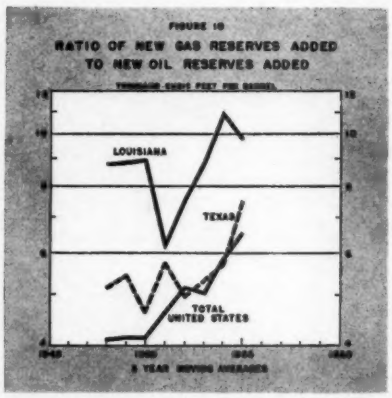


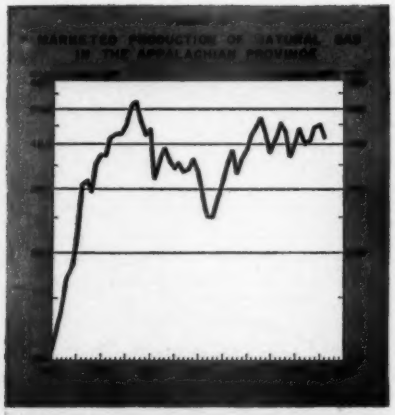


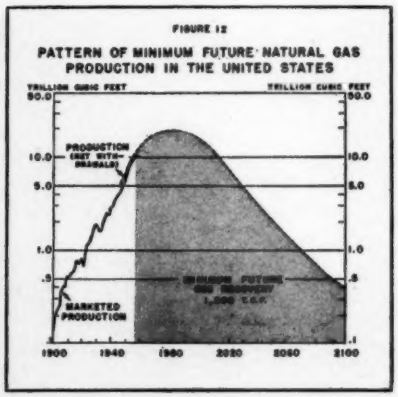












The form value of a raw energy source determines the magnitude of end use. Because of its liquid state, oil is easily and inexpensively transported. And it can be provided in a wide range of useful products. Natural gas, too, can be easily transported, although at higher costs than oil, and its convenience of utilization imparts a high form value. Such characteristics have permitted both oil and natural gas to capture markets from solid fuels.

Illustrated in Figures 3 and 4 is the fact that all the growth in energy use the past 36 years has been enjoyed by oil and gas. Compared with 1920, the nation in 1956 had increased its consumption of energy by 22.3 quadrillion Btu. In the same period the combined contribution of oil and gas rose by 24.8 quadrillion Btu. Together, the two fuels have grown since 1920 at an average rate of 6.0 per cent a year. The postwar period has seen an expansion rate averaging 7.0 per cent a year.

But to expect this pace to continue for another decade would be unrealistic. If the two fuels were to continue growing at a 7.0 per cent rate, they would increase their share of the energy market from 67.5 per cent in 1956 to 92 per cent by 1966. That would necessitate a reduction of coal's share from 28 to 5 per cent. And annual coal consumption would fall from 12 quadrillion Btu to about 3 quadrillion. We have no justification, however, for believing that this actually could happen.

The spectacular growth rate of natural gas in the postwar period was due in an important degree to the displacement of coal. In urban areas gas also competed successfully with oil for new markets. The cream has now been skimmed off. The number of potential conversions to gas from coal has been sharply reduced. Most of the urban markets have been penetrated and oil will be able to compete more effectively in the rapidly growing suburban areas. It appears that in the second half of the next decade natural gas growth will proceed more nearly in line with the expansion rate of over-all energy. Oil, being the more versatile fuel, seems likely to grow somewhat faster. There are numerous markets, motor transportation being the most important, which belong exclusively to oil.

It is our conclusion that the combined demand for oil and natural gas will in-

(Continued on page 38)

Pitfalls of marketing experience

By J. H. BRINKER

General Manager
A. O. Smith Corporation
Kankakee, Illinois

Excerpts from a talk delivered by Mr. Brinker at the Midwest Sales Conference of the A. G. A. Residential Section in Chicago.

Has not the gas industry for many years been something like the people of Israel when Joseph was living?

You remember the situation. Joseph had been the trusted adviser to the old Pharaoh and able to protect the people of Israel. But now the old Pharaoh was dead and so was Joseph and the people of Israel had a new and dangerous situation with which to cope. They were successful in meeting the situation but only after some trials and the emergence of a new leader—Moses, who met the challenge and led them to the Promised Land.

Gas came to be recognized as the quality fuel. The people wanted to heat their homes with gas and in 1956 gas took from oil the lead in central house heating. Last year the gas utilities connected the 30,000,000th customer to their lines which doubled the number they serve in less than 25 years and you can add to that over 8,000,000 LP-Gas installations. Residential customers for all gases have grown from 18,000,000 in 1940 to 35,000,000 today.

The phrase "cooking with gas" became part of our language and was synonymous with first class and quality. Gas water heater sales in 1956 were about five times what they were in 1940 and electric water heaters reached their peak several years ago and are seemingly in retreat. The gas dryer had come into existence to add to load building successes in recent years. You have made a tremendous growth of gas pipelines necessary.

It all sounds great doesn't it—and it is. The gas industry is moving forward. There is no question about that, but are we moving forward fast enough or is this progress an illusion created by moving along in a dynamic economy bursting with growth and an exploding standard of living? Let's look at that for a moment. How are we doing, relatively speaking?

Never in the history of this world has mankind seen such a tremendous and rapid expansion of an economy and increase in the standard of living of a people as America has experienced since World War II.

How has the gas industry done in this situation? An honest appraisal would have to say that relative to the growth of the economy and competing fuels, it is a mixed picture. Before World War II the gas kitchen was apparently doing well and the gas range was the big load builder for the utility. The gas refrigerator came into the market in the mid-20's and it helped too. Where is the gas refrigerator today? I'll let you answer that question since I know very little about it but what I know isn't good.

The gas range is still of great importance but GAMA's data shows that gas range shipments in 1956 are about the same as they were in 1941. To quote Cecil Dunn, chairman of GAMA's Domestic Gas Range Division and president of Magic Chef, Inc., "The 1957 economy and 1941 sales volume are about as compatible as whipped cream and sauerkraut." The gas water heater and gas heating appliances have done very well and certainly have kept up with the economy. These gas appliances have considerable technical advantages over their competitors.

The dryer is a new appliance and characteristic of the new standards of labor saving machines for the home. The gas dryer is in second place in spite of advantages over its electric competitor. The gas range has advantages over electric too but its share of the market has declined from 80 per cent in 1940 to 58 per cent in 1956.

A candid evaluation of these facts seems to say that gas appliances have kept up with the economy only where a distinct and conclusive technical advantage lay with the gas appliance. These appliances where the advantages—although real—were less dramatic, have either lost ground once held or failed to establish a leading position.

Is this a serious situation? I think it's terribly serious and it brings us to face the necessity of what Mr. Dulles called "an agonizing reappraisal of our policies" and leads to our subject, *Beware of Marketing Experience.*

That title, like most titles, was phrased to catch the imagination and is too inclusive. I am not going to advocate discarding all we have learned about selling things in this country because I believe that the marketing skills of our business enterprises are largely responsible for the growth of our economy and the demand for modern goods and services that sustain it. Experience is precious and costly to acquire.

It's a little experience that worries me, particularly when that experience is not well documented and evaluated; when it is not based on established facts which are constantly rechecked; and

(Continued on page 40)

W. R. Oref, Equitable Gas Company geologist (center) explains function of an underground storage pool near Elizabeth, Pennsylvania, to 40 members of a recent B.I.E. Day tour of the Equitable Gas system

Pittsburgh Chamber of Commerce, industry join to launch renaissance; seek to make city a clean, modern and civic-conscious community

Equitable a host for B.I.E. Day

Howard Shively, Equitable Gas Company superintendent of system operations, reveals the story behind telemetering to interested teachers. Visitors were welcomed to the company by President A. W. Conover

Probably one of the greatest collective efforts in the nation is being put behind the Pittsburgh renaissance program, which is rapidly making the city one of our cleanest, most modern, and civic-conscious communities.

An elaborate bicentennial celebration will be held in 1958, and many millions of dollars are being spent to beautify and modernize what was once called "The Smoky City." Acres of slum area are being demolished to make room for a giant outdoor sports arena. New highways, new buildings, new bridges, new gas lines, and a new outlook are vital elements of the new Pittsburgh.

Naturally, movements such as this require the cooperation of all the citizens, business men, industrial leaders, and educators. It was in order to foster a better understanding between educators and Chamber of Commerce members that B.I.E. Day (Business-Industry-Education) was initiated in 1954.

B.I.E. Day affords educators the chance to learn first hand about the various businesses and industries in the area. The Chamber hopes to create a favorable public opinion of business operation by informing the teachers of the problems of business. Also, business men have a chance to make first hand observations of the educational system that will produce the business leaders of tomorrow.

It works like this. One year the teachers are invited to visit business and industry; the next year people from business and industry visit the schools. This creates good will and understanding on all sides.

Among the first to back the B.I.E. Day idea, Equitable Gas Company has recently completed its third year of B.I.E. Day tours as host to a group of 40 area teachers who toured a part of the system.

Beginning with a welcoming address by the president, A. W. Conover, Equitable did everything it could to make the group feel at home. Name tags were issued and coffee and doughnuts served in the morning to create an informal and friendly atmosphere.

Vice-President J. H. Marks briefly gave a general picture of the company's operations and the distribution system. This was followed by a question period.

The teachers were split into three groups, Public Relations Supervisor T. P. Murphy making certain that teachers from the same school were grouped with others in order to prevent discussions among friends from interfering with the program.

The tour began with an inspection of the headquarters building. Of special interest to the teachers was the pressure office. Here Howard Shively, superintendent of system operations, explained that Equitable, which has used telemetering since 1929 will soon be able to control practically all its major points from the central pressure office.

Mr. Shively showed the group the various recording instruments and equipment and the weather teletype machine. On a huge map of the system, he pointed out the northward flow of Equitable's gas from West Virginia and Kentucky. It was at this point that the teachers began to conceive the enormity of the company's operation.

In visiting the customer service department, the group heard the supervisor, William Bradley, explain the expensive modern system of filing safes and telephone equipment. Here the teachers observed what happens when a customer calls for service, or to begin or terminate an account.

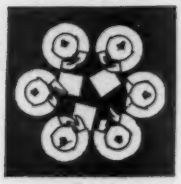
After visiting various other offices in the main building, the group was taken by chartered bus across town for lunch at "Friendship Cottage," the home service department. Here, company officers met informally with the teachers and discussed mutual problems.

Afterward, the group boarded the bus to continue its tour, visiting Tepe measuring station (the "city gates"), Hartson Compressing Station, and Bunola Storage pool. This was an enjoyable and instructive ride through the country. A company geologist and various officials were on hand to explain the operation and answer technical questions.

Letters of appreciation were received daily after the tour. They emphasized that the educators now have a more sympathetic understanding of the problems of Equitable and other utilities.

One of the compressors at Hartson Compressor Station, Finleyville, Pennsylvania, is observed by county and parochial school teachers

The modern Hartson Compressing Station forms the background for these teachers from St. Brendan School of Braddock, Pennsylvania



Industrial relations round-table

Prepared by
A. G. A. Personnel Committee

Edited by W. T. Simmons
Assistant to the Personnel Manager
Philadelphia Electric Company

● **How is your civic participation?**—Community activities have nothing to do with your job? Is it something only for the top men?

If that is your attitude, listen to the opinion of Donald K. David, former dean, Graduate School of Business Administration, Harvard University:

"No man can postpone his participation in public affairs until he attains top management. Each one of us from the moment we enter business must learn to carry part of the responsibility of business to the communities in which it lives. In my opinion top management should encourage younger men to take an active part in the common endeavors of our society."

This direct statement indicates that it is part of our job to represent the wholesome influence of business in the affairs of our community. It may also be used as a training ground (and showplace) for our executive ability.

● **Pay for night-time jurists?**—Time off with pay for jury duty is a common practice today. But how about employees who work on second and third shifts? The Associated Industries of Cleveland put a straw into the wind recently to find the trend. Here's what it discovered.

In a cross-section of 25 member companies, only two grant time off with full pay for jury-serving second- and third-shift workers. Ten plants, however, make up the difference in pay. One pays $5 a day. The remainder simply grant time off without pay.

No company requires an employee to work second or third shift the same day he serves on a jury.

● **Getting cabbies on your team**—How good is the information about your company that passengers get from cab drivers? When the Hawaiian Sugar Planters Association found misinformation was common among tour car drivers who act as guides for visitors touring the Hawaiian Islands, they arranged to do some training.

The association now invites these drivers to a luncheon meeting. They are shown a film about the sugar industry. Questions are answered and a leaflet is given to them showing plant locations, production statistics, and similar helpful information.

A simple way to add key communicators to your team.

● **Court Decisions**—*Court rules against veteran's claim to higher minimum rate*—The Federal District Court for Colorado dismisses the suit of an employee of *The Denver Post,* Inc., who complained that he was deprived of an increase in minimum weekly wages which would have accrued to him if he had been given credit for approximately 18 months spent in military service.

The decision of Federal Judge William Lee Knous follows similar decisions in other courts holding that a returning veteran is not entitled by reason of the benefits given to him under the Selective Service Act to acquire salary increases founded upon actual experience gained by on-the-job employment when he had in fact gained no such experience while in the military service.

In this case, Larry Brown was employed by the Denver newspaper in November 1950 as a part-time supervisor of carrier routes. He was given full-time employment Jan. 18, 1951. He left his job to enter the armed service March 16, 1951, and returned to work Nov. 3, 1952.

At the time Mr. Brown was employed, the contract between the *Post* and American Newspaper Guild provided a schedule of minimum weekly salaries for the circulation department, with the salary going up a step with completion of each year of service during the first four years of employment. When he entered military service two months after obtaining full-time *Post* employment, Mr. Brown was paid the minimum of $42 a week for the first year under the contract. When he returned to work in November 1952 he was re-employed at $47 a week, which was a new minimum for the first year. The minimum pay scales had been revised upward during his absence.

The contract also provided that any employee entering military service shall be considered on leave of absence and when released from service shall resume his position or a comparable one with a salary no less than he was receiving at the time of entering such service. It also provided that if the scale minimum for his classification should be higher on his return, the employee then would be entitled to that minimum.

Mr. Brown has been advanced to the minimum step rate provided by the guild contract for each succeeding year of experience, but he contends that the time he spent in the service should have been considered in determining *when* he was entitled to the yearly step-rate increase.

The *Post,* on the other hand, contended that the contracts in force both when Mr. Brown left for military service and when he returned, specified that an employee is entitled to the yearly step-rate increases only if he is in the actual on-the-job employment of the newspaper company for a full year and has thus acquired one full year's experience. It contended that Brown was not entitled to have his 18 months of military service considered in determining when he was to be given a step-rate increase.

Thus, the issue posed for the court was whether an employee is entitled under the contracts with the guild and under Section 459 of the Selective Service Act to step-rate increases merely on the basis of years of employment or only after years of on-the-job employment with the attendant experience. Judge Knous says that the second view must prevail.

Employees' seniority suit—The Supreme Court's refusal to grant an appeal leaves in effect a 7th CA ruling that before a group of employees can sue their employer in any court for depriving them of their seniority rights, they must exhaust the union contract's grievance procedure, and any possible NLRB remedy *(Anson* v. *Hiram Walker & Sons).*

Importance of wage records—For most businesses, it would not be sound policy to have wage payments figured on employees' versions of how many hours they worked. But a U. S. district court in Pennsylvania has warned employers that this can happen if they fail to keep adequate records as required by the Wage-Hour Administrator (*Derose* v. *Eastern Plastics Inc.,* 35 ALC 1345).

An employee sued an employer for failing to pay him overtime. The company agreed that he had worked overtime, but disputed the amount of overtime hours involved. At the trial, the employee said that his daily hours invariably ran from 8 a.m. to 6, 7, or 8 p.m., and that he occasionally worked from 24 to 28 hours at a stretch. He claimed that he had never had more than three hours' sleep at a stretch during his first year and a half on the job.

He offered a written statement estimating the number of hours of overtime that he claimed was unpaid. This statement was prepared in 1954, and it covered the period from February 1950, to April 1952. He admitted that this was not the exact number of hours, but said that it represented his best estimate. The court allowed the jury to consider it. The company introduced no records of the number of hours worked by the employee, and the jury awarded him $3,000. The employer argued that the employee's estimate was too conjectural and uncertain, and asked for a new trial.

In refusing to grant a new trial, the court noted that other evidence was introduced to support the employee's case, that the employer introduced no records, and that the issue of credibility of the employee's evidence was to be resolved by the jury. The court relied heavily on the Supreme Court's ruling —in the Mt. Clemens Pottery case—that although the employee had the burden of proving the case against the company, the employer's delinquency in keeping "accurate and complete" records should not result in the employee's being penalized for being unable to prove the "precise extent of the uncompensated work."

Above, an engineer observes equipment used in study of non-primary aerated target burners (showing sound level meter with microphone, experimental target burner and orifice, scale for determining flame size and position of orifice, manometer, wet test meter, thermocouple selector switch box, potentiometer, and thermal conductivity air-gas analyzer). Below, an impingement target burner operates with "normal" flame. Study was made at A. G. A. Laboratories

Burner uses only target and orifice

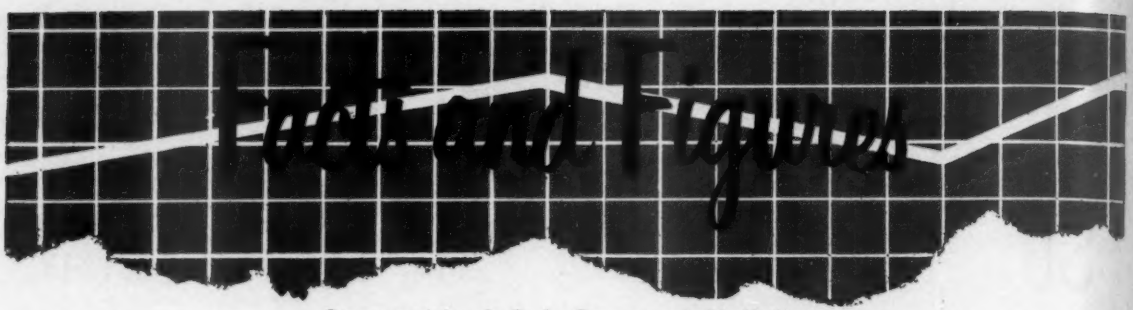
The feasibility of using impingement target burners in contemporary gas appliances is discussed in recently published Bulletin 75 by the American Gas Association Laboratories.

Research Bulletin 75, *The Design and Application of Impingement Target Burners,* covers work conducted under the Association's research project DA-5-GU *A Study of Fundamentals of Design of Blue Flame Gas Burners with Little or No Primary Aeration.* The study was performed as a PAR Plan Activity at the A. G. A. Laboratories and was sponsored by the Committee on Domestic Gas Research.

Impingement target burners discussed in Bulletin 75 use only an orifice and a flame spreader or target. In its simplest form, the arrangement completely eliminates the conventional burner with its air shutter, venturi, mixing tube, and burner head. The orifice becomes the port. Primary air is entrained in the open by the gas jet on its way to the impingement target. The air-gas stream strikes the target, mixes, then burns around the outer periphery of the target in the presence of secondary air.

The impingement target burner in operation is inherently noisier than the conventional drilled port burner operating at an equivalent heat input rate. Ob-

(Continued on page 33)



Prepared by A. G. A. Bureau of Statistics

Gas utility and pipeline construction expenditures during the first quarter of 1956 aggregated $415 million, up 42.1 per cent from the $292 million spent during the first quarter of 1956. Gas industry construction expenditures for 1957 are estimated at over $2.1 billion, an all-time high.

Total sales of the gas utility and pipeline industry to ultimate consumers during April 1957 amounted to 6,961 million therms, an increase of 5.7 per cent over the 6,586 million therms sold in April of last year. This increase in gas sales occurred in spite of the much warmer weather experienced in April 1957, and is primarily due to the additional number of new customers served by the industry through new home construction and the increased number of househeating units installed since April 1956. April 1957 had 53.4 less degree days than the same month in the previous year, representing a decrease of 14.1 per cent. Sales of gas to industrial users increased approximately 3.0 per cent. Industrial production, as measured by the Federal Reserve Board index was 144 (1947-1949 = 100), up 0.7 per cent over April 1956. The Association's April index of gas utility and pipeline sales is 232.2 (1947-1949 = 100).

During the 12 months ending April 30, 1957, total utility and pipeline sales of gas aggregated 73,209 million therms, equivalent to an increase of 5.5 per cent over the 69,423 million therms consumed in the 12 months ending April 30, 1956.

The annual rate of new housing starts edged up to the highest level of the year in May, the Labor Department reported, but starts were the lowest for the month since 1951 and down 10.3 per cent from a year ago. The department reported that work was begun on 102,000 homes during May, as com-

(Continued on page 43)

SALES OF GAS AND ELECTRIC RESIDENTIAL APPLIANCES DURING MAY 1957

(WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	May		April		First Four Months Ending April 30, 1957	
	Units	Per Cent Change	Units	Per Cent Change	Units	Per Cent Change
RANGES						
Gas	157,200	—12.5	167,700	— 5.0	657,900	— 9.2
Electric	n.a.	n.a.	107,200	—31.9	518,800	—17.1
WATER HEATERS						
Gas	238,600	— 2.3	238,200	— 1.2	887,900	—11.8
Electric	n.a.	n.a.	65,600	18.5	250,700	—19.7
GAS HEATING						
Furnaces	52,900	—17.1	51,900	— 7.0	195,800	—11.0
Boilers	6,600	+ 8.2	5,900	— 9.2	22,200	— 5.5
Conversion Burners	8,300	—30.8	10,000	+ 4.2	30,900	—12.0
OIL-FIRED BURNER						
Installations	37,103	—15.5	36,844	—11.6	156,393	—15.0
DRYERS						
Gas	n.a.	n.a.	15,100	0.0	116,700	—10.0
Electric	n.a.	n.a.	27,800	—44.2	269,000	—25.9

GAS SALES TO ULTIMATE CONSUMERS BY UTILITIES AND PIPELINES DURING APRIL

(MILLIONS OF THERMS)

	1957	1956	Per Cent Change
Month of April			
All types of Gas	6,961.1	6,585.9	+ 5.7
Natural Gas	6,739.4	6,215.4	+ 8.4
Other Gases	221.7	370.5	—40.2
Twelve Months Ending April 30			
All types of Gas	73,209.2	69,422.9	+ 5.5
Natural Gas	70,601.2	65,798.2	+ 7.3
Other Gases	2,608.0	3,624.7	—28.0
April Index of Monthly Utility			
Gas Sales (1947-49 = 100)	232.2	219.6	+ 5.7

PERTINENT BUSINESS INDICATORS, APRIL

(WITH PER CENT CHANGES FROM CORRESPONDING PERIOD OF THE PRIOR YEAR)

	April			March		
	1957	1956	Per Cent Change	1957	1956	Per Cent Change
Industrial activity (1947-49 = 100)	144	143	+ 0.7	146	141	+ 3.5
Consumer prices (1947-49 = 100)	119.3	114.9	+ 3.8	118.9	114.7	+ 3.7
Housing starts, Non-farm (thousands)	92.0	111.4	—17.4	83.0	98.6	—15.8
New private construction expenditures ($ million)	2,365	2,424	— 2.4	2,228	2,260	— 1.4
Construction costs (1947-49 = 100)	158.0	152.0	+ 3.9	156.6	150.8	+ 3.8

n.a. not available.

Suggested 'Code' changes studied

Subcommittee 8 of the ASA B31 Committee met May 22-24 to discuss suggested changes in the American Standard B31.1.8-1955. More than 80 members and guests attended the three-day meeting at Cleveland's Hotel Statler.

This group, under the chairmanship of John H. Carson, vice-president and general manager, The East Ohio Gas Co., is charged with keeping this American Standard abreast of current technological developments in gas transmission and distribution piping systems. This is the second meeting of the full group since publication of the present Code. In the intervening time, considerable work has been accomplished by meetings of subgroups and task groups for specific investigations.

The Code has gained wide acceptance in the gas industry. Sponsored by the American Society of Mechanical Engineers as a section of their "Pressure Piping Code," Section 8 was approved and endorsed by the A. G. A. Board of Directors in 1954. Within one year of its publication in 1955, nearly the entire industry voluntarily adopted the Code.

Four of the subcommittee's nine subgroups met May 22 when suggestions and questions regarding the Code were investigated and considered. The second day the entire subcommittee met to consider further the results of the subgroups' investigations. On all items on which reasonable concurrence was reached, final disposition was left to a letter ballot to be sent later to each member of the subcommittee. The third day the members divided into groups and made inspection trips to three nearby tube mills—Lorain Works, National Tube Division of U. S. Steel; Youngstown Works, Republic Steel Corporation; and Briar Hill Tube Mill, Youngstown Sheet and Tube Company.

Among the major items under con-

The chairman and vice-chairmen of Subcommittee 8 (l. to r.) are: John F. Eichelmann, Walter H. Davidson, John H. Carson (chairman), and B. C. White. Group met May 22-24

Six subgroup chairmen attending are, seated l. to r.: Roscoe D. Smith, Stephen A. Bergmen, and William M. Frame. Standing, l. to r.: J. J. King, B. T. Mast, M. J. Paul

sideration by the Materials Subgroup were revisions to the standard specifications referred to in the Code. It was necessary to review these specifications from time to time to see that any changes made in them by the corresponding Specifications Committees still meet with the over-all purpose of the B31 Committee.

The Subgroups on Distribution and Mechanical Design gave particular consideration to welding standards and the safe embedment distance—both involve problems which have a long history in the gas industry. Also under consideration was vault ventilation. Because practices vary in different localities, it is extremely difficult to set up a single standard for this procedure.

The entire subcommittee heard reports, including one by B. W. Snyder, Canadian Western Natural Gas Co., Ltd., who stated the Code endorsement had been reaffirmed by the Canadian Gas Association and the Code has been adopted by the province of British Columbia.

C. W. Wheatley, A. O. Smith Corp., vice-chairman of the subcommittee's Research Subgroup, reported on the progress of the Pipeline Research Committees of A. G. A. and the American Institute of Steel and Iron. G. D. Mock, Washington Gas Light Co., spoke on the activities of the American Society of Civil Engineers Committee on Pipeline Crossings of Highway and Railroads.

Representatives on Subcommittee 8 are from 16 gas distribution companies, 17 gas pipeline companies, 11 steel companies, 10 construction and consulting firms, 5 trade associations and 2 gas producing companies. In addition, 2 private research organizations were represented, as are two universities, the University of Alabama and Iowa State College, the National Board of Fire Underwriters, the National Association of Railroad and Utility Commission, the U. S. Bureau of Mines, the Federal Power Commission, and the Michigan State Public Service Commission.

Carl Kallina, chief, Bureau of Rates and Gas Certificates, represented the FPC, and Charles Maxwell, gas engineer, represented the Michigan State Public Service Commission which recently adopted the Code.

What our competitors are saying . . . . . .

. . . How does the electric industry feel about the role air conditioning will play in controlling the load of the entire home?

. . . What is the opinion of Edison Electric Institute's president as to "selective selling?"

Answers to these and other questions may be found in the April 22 number of **"Electrical World"** in a report on this year's 23rd EEI Sales Conference in Chicago.

For example, **E. J. Klock**, General Electric Company's market analyst believes that:

". . . Doubling of the electric energy load every ten years will not come 'just naturally,' at least it has not come naturally in the past. It was brought about by developing new and improved products and services that the customer really needed and wanted. The challenge . . . is there in the form of rising curves of population and income. Your opportunity is to match these opportunities with your own rising curves of enthusiasm and performance in terms of creating and meeting demand for your product. . . ."

On "selective selling," **Donald Kennedy**, president of EEI and Oklahoma Gas & Electric Company, said:

". . . Avoid selling yourself broke by picking your industrial, residential, and commercial sales so as to give the best return on common. . . ."

M. G. Kennedy of Ebasco on comfort conditioning:

". . . The next five years will be critical ones in the battle for residential and commercial loads . . . I share with many utility executives the belief that he who controls the year-round comfort conditioning can control the load of the entire home. . . ."

Warns **E. R. Ambrose**, AG&E air conditioning head:

"The gas boys are fast perfecting an absorption-type conditioner that uses 27 cubic feet of gas per ton of refrigeration. The electric conditioner will probably keep the lead in 1957, but don't get complacent. Utilities must encourage manufacturers to put out better designs."

Looking ahead, the electric industry also eyed the possibility of electric heating for schools. Edwin L. Wiegan's **C. F. Kreiser** optimistically reported:

"School heating is generally an off-peak load. Heat is on only about 15 per cent of the school house because lights and students build-up the heat again to required levels. . . ."

Don't forget about commercial cooking, says Hotpoint's **W. C. Ayers** and EIP's **D. W. Grosshandler.** They agreed that:

"Commercial cooking promotion can't be split up; manufacturer and utility have to do it together. It offers an average of $26 per installed kw for the manufacturer and $25-$40 for the power company. . . ."

The market is ready for big sales—sell the kitchen as a package! That's the advice of **Edwin Vennard** on selling electrical appliances in today's rapidly changing markets. He said:

". . . It isn't much harder to sell a $3,000 kitchen than it is a $300 refrigerator. . . ."

Said **George Taylor** of Daybrite:

". . . Electric heating loads of all kinds will total 37.7 million kw and will mean $4.1 billion earned annual revenue by 1965. . . ."

The picture isn't all rosy, in the opinion of EEI's Chairman of Commercial Division Executive Committee's **T. O. McQuiston**, who outlined the jobs done by his company the past year. He asked the EEI to:

"Make a study of the 'sick' water heater business. Utilities have asked for too many models. . . ."

Long-range planning need cited

Increasing complexity of the American industrial economy, increased competition between gas companies and purveyors of other fuels, as well as competition with other industries seeking a share of the consumer dollar, strengthens the need for long-range planning by utilities.

Industrial companies generally have undertaken such activities to a far greater extent than utilities. A recent analysis by William E. Hill and Charles H. Granger, management consultants, prepared for the American Management Association, provides some enlightening information. They point out that companies which have benefited most from long-range planning are companies with relatively large financial commitments to make, a criterion which obviously applies to utilities. They quote a statement by Ralph Cordiner of General Electric that "reduced to its simplest terms the manager's basic planning responsibility is to make the most effective application of human resources, money, physical assets and time to the achievement of our common objectives."

Some objections to long-range planning frequently offered are that customers don't really know their plans, which complicates the preparation of reliable forecasts; and that long-range planning is too vague.

Although appliance purchase intentions of consumers of utility services may be subject to substantial change, experience has shown that in the aggregate valid predictive conclusions can be drawn from market studies and surveys using various newly developed research techniques at relatively modest expense. With regard to the second objection, it should be pointed out that a high degree of precision is not an essential feature of long-range planning; the general magnitude of operations in the distant future is vital as a guide for planning investments, personnel requirements and other essential company operations.

Long-range planning should be carefully coordinated at the top management level so that the program will obtain the total support of everyone in the organization, encourage the attraction and retention of highly qualified personnel, create confidence and respect among the financial community and other sources of capital, and permit proper coordination of all phases of company operations.

A recent analysis of the long-term forecasting techniques used by a group of alert gas utility companies provides some indication of the extent to which long-range forecasting is already used to plan the future, and the methods employed.

More than one-half of the companies indicated that they prepare forecasts of customers and sales for five years in the future, while more than one third undertake similar projections of new housing construction within their service area, available gas supply, and peak day sales. There is no doubt that the proportion of companies preparing such forecasts is gradually increasing.

With regard to new housing forecasts, the most generally used factors are past and current trends, and estimates provided by building contractors. Other factors frequently considered include building permit data, new housing starts, the ratio of vacancies, surveys of building sites, forecasts of business activity, consideration of special local re-development programs, and the opinions of local business organizations.

In developing forecasts of residential customers, the construction forecasts together with past and current trends in customer growth are the most generally used factors. In addition, population trends and data on housing demolitions are widely used, and some companies analyze anticipated location of new industry, conversion of buildings, consumer surveys, and trends in appliance sales.

In developing projections of appliance saturations, factors used are past trends, historical data on appliance sales throughout the service area, average age at replacement of existing appliances, changing building and living standards, comparative cost of gas and competitive appliances, and estimates of new construction.

The most frequent sources of information used in preparing long-term forecasts of all types are existing company records; building permit data; various economic and marketing publications; local or federal government statistics; interviews and contacts with builders; architects and contractors; chambers of commerce; financial institutions; consumer surveys; appliance distributors and dealers; and various economic indexes.

In terms of presentation to management of long-term forecasts, almost equal favor is accorded to each of the two alternatives—informal internal memoranda and formal internal reports. The latter approach is generally favored for forecasts of annual and peak day sales, while the former approach is more generally used on projections relating to customers, appliance sales, and saturations. In only slightly more than 10 per cent of the instances are long-term forecasts made the subject of general publication, although it would seem apparent that such material would be valuable in influencing the financial community favorably toward the company.

Considerable divergence exists in the frequency with which forecasts are reviewed and revised. The best generalization is that forecasts prepared for a number of years by quarters are revised annually, while those divided into monthly totals are revised either semi-annually or annually.

Gas leaders from Canada, Cuba and Puerto Rico join 200 U.S. representatives at Annual Production Conference

Accomplishments of A.G.A. research program reviewed

Section leaders are, l. to r.: H. C. Jones, 2nd vice-chairman; Grove Lawrence, chairman; and V. F. Bittner, 1st vice-chairman

International aspects of the dynamic gas industry were underscored at the Annual A. G. A. Production Conference as representatives of companies in Canada, Cuba and Puerto Rico joined more than 200 industry leaders from the United States May 20-22 at Bal Harbour, Fla., to discuss current progress and future development.

The "forward look" was accented during the three-day program of reports, panel discussions and technical presentations, with particular emphasis on research aims and accomplishments. Several sessions were devoted to long-range objectives for production of utility gas from solid and liquid fuels as a means of supplementing natural gas supplies to keep pace with the nation's growing energy requirements.

The research picture was reviewed in detail by T. L. Robey, A. G. A. director of research, at the opening general session May 20. He reported that the A. G. A. research program, which had its inception in 1925 and has been engaged continuously on natural gas since 1933, has completed about 140 projects since it was coordinated and expanded as the PAR Program in 1944.

Mr. Robey said the 1957 research program emphasizes: 1—appliance improvement, in all utilization fields; 2—pipeline gas from coal; 3—transmission activities; and 4—gas-fueled air conditioning.

Program is versatile

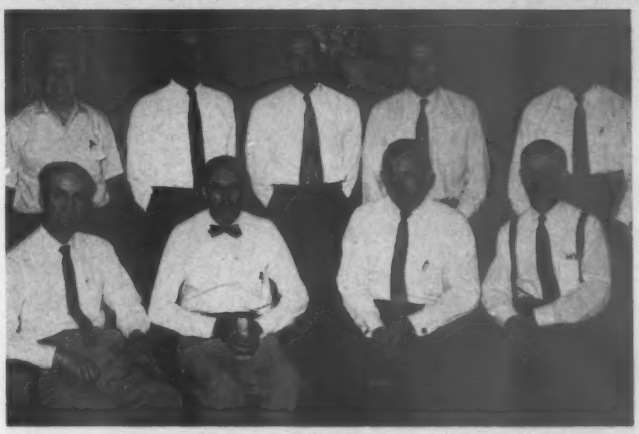
"Our research program is perhaps the most versatile of any cooperative, industry-trade association program," he said. "We run all the way from highly refined mathematical studies to the newer and as yet unsolved problem of direct conversion of chemical to electrical energy; from a tiny pilot burner on the experimental bench to a pilot plant requiring four men per shift to operate and costing some $100,000."

The Production Conference was sponsored by the Chemical and Engineering Committee and the Manufactured Gas Production Committee, whose respective chairmen are D. L. White, Washington Gas Light Co., and Joseph G. Voelker, Central Hudson Gas and Electric Corp.

H. C. Jones, Gas Division of New England Electric System, made a report on Operating Section activities in his role of second vice-chairman of the section, and made the presentation of committee service awards. Plaques were awarded to two former committee chairmen: J. L. Turnan, Worcester Gas Light Co., and Samuel Cohn, Peoples Gas Light and Coke Company.

Scrolls were presented to the following past chairmen of subcommittees:

Gas Operations Research Committee speakers, l. to r.: front—J. H. Eiseman, F. J. Pfluke, and A. D. Harrison. Back—R. B. Smith, B. J. Clarke, W. E. Russell, C. C. Lamar, W. D. McElroy



Chemical, engineering, speakers were, l. to r.: front—E. G. Hammerschmidt, G. G. Dormer, D. V. Kniebes, C. W. Warner. Back—L. M. Van der Pyl, R. H. Crowe, L. R. Bullett, D. McA. Mason, A. C. Curtis

A discussion of alternate methods of meeting peak demands was given by this group, l. to r.: Dean B. Seifried, J. W. Carroll, H. T. Maloney, B. C. White, J. L. Oberseider, and Robert Kyle

A discussion on gas from solid fuels was given by this group, l. to r.: Charles H. Sawyer (presiding), Ralph L. Coryell, Henry Linden (rear), N. A. Manfred, L. L. Newman, Sidney Katell

D. V. Kniebes, Institute of Gas Technology; G. D. Dormer, Manufacturers Light and Heat Co.; L. M. Van der Pyl, Rockwell Manufacturing Co.; D. F. Cundari, Public Service Gas and Electric Co.; F. J. Frederick, Long Island Lighting Co.; B. C. White, Stone and Webster Engineering Corp.; H. E. Taylor, Alan Wood Steel Co.; W. H. Kramer, Phillips Petroleum Co.; L. P. Bresnahan, Cambridge Gas Co.; H. T. Maloney, Philadelphia Gas Works; B. J. Clarke, Columbia Gas System; and J. W. Carroll, Philadelphia Electric Company.

J. L. Oberseider, Southern California Gas Co., spoke at the opening meeting on economic and engineering evaluations of alternate methods of meeting peak demands. R. N. Papich, A. G. A. safety consultant, discussed *Safety and the Supervisor,* and Francis E. Drake, Drake & Townsend, Inc., presented the Builders' Subcommittee report.

Mr. Oberseider's paper on methods of meeting peak demands was a subject of a luncheon meeting symposium with J. W. Carroll serving as moderator. The panel included Dean B. Seifried, Rockland Light and Power Company; Robert Kyle, The Gas Machinery Company; and B. C. White.

Research projects told

The Role of Gaseous Fuels in the Energy Picture was discussed in another symposium of which William B. Tippy, Commonwealth Services, Inc., was moderator. Participants included Sherman H. Clark, Stanford Research Institute; Dr. M. A. Elliott, Institute of Gas Technology; Hall M. Henry, NEGEA Service Corp.; H. D. Levene, El Paso Natural Gas Co.; and Harlan Nelson, Battelle Memorial Institute.

The A. G. A. Research Program was the topic of a third meeting on the first afternoon. Frederick J. Pfluke, Rochester Gas and Electric Corp., who is chairman of the A. G. A. Gas Operations Research Committee, presided. Project reports were made by W. D. McElroy, United Gas Improvement Co.; A. D. Harrison, Brooklyn Union Gas Co.; Robert B. Smith, Columbia Gas System Service Corp., and recently assigned to the A. G. A. staff; Charles C. Lamar, Harper-Wyman Co.; W. E. Russell, Baltimore Gas and Electric Co.; John H. Eiseman, National Bureau of Standards; and B. J. Clarke.

D. L. White presided at the general session which started the second day of the conference. T. S. Whitis, Pioneer Natural Gas Co., outlined technical steps for proof of odorization; B. C. White spoke on refrigerated storage of propane for Atlanta Gas Light Co.; C. U. Pittman, Koppers Co., discussed crude light

● *Production of utility gas from solid and liquid fuels as a supp*

Speakers at first general session were (l. to r.): front—Francis E. Drake, J. L. Oberseider, J. G. Voelker, H. C. Jones; back—R. N. Papich, T. L. Robey

Tuesday afternoon session participants included (l. to r.): front—W. T. Swann, R. W. Gilkinson, A. W. Olsen; back—G. L. Calderwood, E. D. Crouch, P. E. Reichardt, E. O. Rossbach

oil marketability; Dr. M. A. Elliott made a report on research facilities of the Institute of Gas Technology; and O. B. Holman, Philadelphia Gas Works, recounted recent developments in oil gas production.

Current developments and laws with respect to air and water pollution were discussed by A. C. Stern, U. S. Department of Health, Education and Welfare, and W. W. Hodge, Mellon Institute of Industrial Research. Papers were submitted by J. W. Carroll on costs for producing high Btu oil gas and by D. V. Kniebes on maintenance of pipeline compressor engines.

Three afternoon sessions featured these subjects for discussion: gases from fluid fuels, chemical engineering in the gas industry, and plant waste disposal. The respective chairmen were W. T. Swann, Brooklyn Union Gas Co.; R. W. Gilkinson, Rochester Gas and Electric Corp., and A. W. Olsen, Providence Gas Company.

Chemical engineering session

The fluid fuels meeting included, in addition to discussions of papers presented earlier, reports on operating experiences with these processes: high btu oil gas, Hasche LP reforming, and CCR process. Peak shaving operations were also reviewed.

Participants in the chemical engineering session included John H. Eiseman on the use of standardized methane in maintaining calorimeter accuracy; J. L. Oberseider on copper corrosion; P. E. Reichardt, Washington Gas Light Co., on engineering development of peak shaving facilities; and G. L. Calderwood, Rochester Gas and Electric Corp., who served as moderator for a discussion of chemical engineering aspects of catalytic cracking reformers operation.

Subjects explored at the plant waste disposal meeting included the treatment of gas plant effluent and tar handling, by J. G. Voelker; gas and chemical plant effluents discharged to public waters, by W. W. Hodge; and methods used in the abatement of air pollution caused by

...atural gas is studied

...ts of Tuesday morning's general session —O. B. Holman, D. L. White, and W. W. ...Pittman, T. S. Whitis, and A. C. Stern

The role of gaseous fuels in the energy picture was the topic of these speakers (l. to r.): Dr. M. A. Elliott, Harlan Nelson, Hall M. Henry, William B. Tippy, H. D. Levene, Sherman H. Clark

Shown amidst the discussion which followed their talks at the session on manufactured gas production are (l. to r.): Sam Friedman, J. M. Reid, C. R. Murphy, R. G. Minet, and Hugh T. Maloney

smoke and fly ash in oil gas plants, by A. W. Olsen.

On the final morning, G. G. Dormer headed a chemical and engineering session which featured presentations by the following men on a wide range of specialized topics: C. W. Warner, Cutler-Hammer, Inc.; E. G. Hammerschmidt, Peoples Gas Light and Coke Co.; R. H. Crowe, Transcontinental Gas Pipe Line Corp.; A. C. Curtis, Pipecote Service Corp.; L. R. Billett, Northern Illinois Gas Co.; D. V. Kniebes and D. McA. Mason, Institute of Gas Technology.

The second morning session was on manufactured gas production, with H. T. Maloney presiding. Speakers included H. R. Linden, Institute of Gas Technology; Sam Friedman, U. S. Bureau of Mines; R. G. Minet, United Engineers & Constructors Inc.; C. R. Murphy, Warren Petroleum Corp.; and O. B. Holman on behalf of D. A. Dundore, Philadelphia Gas Works.

Production of Gases

Panel discussions highlighted one of two final luncheon meetings, with Ralph L. Coryell, Consolidated Edison Co. of New York, as chairman. N. A. Manfred, Chicago District Pipeline Co., was moderator for a gas odorization panel which included A. D. Nevers, Pennsalt Manufacturing Co.; E. O. Rossbach, Brooklyn Union Gas Co.; L. R. Billett and D. McA. Mason. A discussion of internal pipe sealants and coating, with R. L. Coryell as moderator, was led by G. G. Wilson, Institute of Gas Technology; Raymond H. Crowe and A. C. Curtis.

The concluding luncheon session centered on the consideration of production of gases from solid fuels. Charles H. Sawyer, Coal Division, Eastern Gas and Fuel Associates, and L. L. Newman, U. S. Bureau of Mines, led the discussion. Also taking part were Sidney Katell, U. S. Bureau of Mines; H. D. Levene, H. R. Linden, A. C. Sedlachek, Eastern Gas and Fuel Associates; and R. G. Minet.

Judges named for gas industry public relations competition

THE American Gas Association's first annual Public Relations Achievement Award competition will be judged by Dan J. Forrestal, president of the Public Relations Society of America; James L. Macwithey, president of the American Public Relations Society; and Harold W. Springborn, vice-president of the Moore Publishing Company.

Dan J. Forrestal

J. L. Macwithey

H. W. Springborn

The Achievement Award will be presented at the A. G. A. convention at St. Louis Oct. 7-9 for the outstanding public relations activity dealing with a specific problem during the past year. The winner must have contributed to improved public opinion and understanding of the company or the gas industry.

Closing date for filing is July 15; entries must be received at American Gas Association Headquarters by August 15.

Mr. Forrestal is manager of public relations for Monsanto Chemical Company, St. Louis, and Mr. Macwithey is assistant vice-president and director of public relations for the Bristol-Myers Company, New York. Mr. Springborn, who is also from New York, is executive editor of four gas industry publications—*Gas Age, LP-Gas, Industrial Gas,* and *Heating & Gas Appliance Merchandising.*

Competition is open to any distribution, producing, pipeline or manufacturing company which is a member of the Association. The entry must cover an activity which has been planned and carried out solely by the company or in cooperation with professional public relations counsel or agency. The project may not be of a direct sales or merchandising nature, and any advertising involved must carry an institutional or public information theme.

The judges have been given discretion to award special Certificates of Merit to companies participating, in addition to the trophy and Certificate of Achievement to the top-rated entry.

T. H. Evans, chairman of the A. G. A. General Public Information Planning Committee, said "This award has been established to encourage the continued growth and success of each member company's public relations and thereby enhance the national gas industry's reputation as a good citizen and its prestige and standing in the eyes of the general public."

Stackpole heads program of annual gas measurement short course

C. S. STACKPOLE, managing director of the American Gas Association, will present the principal address at the Appalachian Gas Measurement Short Course scheduled for Aug. 26-28 at West Virginia University. Dr. Irvin Stewart, president of the university, will deliver the welcoming address, and Hale Watkins, secretary of the West Virginia Oil and Gas Association, will deliver the response.

The course provides information on application, operation and repair of natural gas quantity measurement and pressure regulation equipment.

The latest developments in this equipment will be exhibited by 45 of the nation's leading gas equipment manufacturers.

Instructors for the various classes and forums are technical experts from the industry, research, and universities. General chairman of the course is H. B. McNichols, Columbia Gas System Service Corporation, Columbus, Ohio; program chairman is James W. Chrisman of The East Ohio Gas Company, Cleveland.

For the complete program and further information regarding registration and dormitory or hotel accommodations, contact Prof. R. E. Hanna, West Virginia University, Morgantown, West Virginia.

Meet your Association staff

Gladys Hanshaw

When A. G. A. was still in its infancy, a petite blonde with an eye for accuracy and a flair for winning friends sought a job as a beginning stenographer. She was Gladys Hanshaw, fresh out of high school. One of the six men on the A. G. A. staff hired her, and fortunate it was for the Association.

Miss Hanshaw progressed rapidly through a series of secretarial positions, landing finally as secretary to the late Hugh Hartman, founder and secretary of the Accounting and Technical Sections. During this period she completed a stenotypy course at Columbia University, enabling her to record verbatim the two Sections' annual conferences. The valuable experience she gained under Mr. Hartman then enabled her to continue in the Sections' work after his death in 1940. In 1946, she was appointed assistant secretary of both Sections.

A year later she was named secretary of reservations and arrangements, the post she holds now. As the one woman in the one-woman department, she assists the A. G. A. staff by arranging travel accommodations and itineraries for close to a hundred trips a month. She is also called upon to make special travel arrangements for committee groups, place individual and group hotel reservations, and secure hard-to-get theatre tickets.

Her own travel includes daily commuting to Brooklyn, where she and her husband live in a large, Queen Anne style, all-gas house. They can be found there each weekend, except for the hours between two and five-thirty on Saturdays.

That's theater time for them, and there aren't many hit shows they haven't seen.

The next few weekends will be a pleasant exception. They'll be on vacation, with travel arrangements scheduled in advance, as usual. Itinerary? Miami, then Jamaica, then Dominican Republic and the Virgin Islands.

W. D. SWEETMAN, *CHAIRMAN* · D. W. PETERSON, *VICE-CHAIRMAN*

Delegation of authority ensures planning by the very people who oversee the work

Pinpoint budget responsibility

The word budget means many things to many people. Budgets may be as diverse as industry itself and can be the greatest single management tool which may spell the difference between the success or failure of the business enterprise.

Industry cannot, as the saying goes, fly by the seat of its pants. It must have clearly defined objectives and goals based on well established standards of performance or, stated another way, it must have: (1.) before action planning, (2.) during action review, and (3.) after action analysis.

With this three-step approach to good management, let us analyze just how this formula applies to the title of this discourse on *Pinpointing Responsibility for Deviations from the Operating Budget.*

Prerequisite to the long-range success of an enterprise is the decentralization of responsibility and authority—thus delegating to the man on the firing line the responsibility for making decisions close to the scene of the actual operations.

The delegation of responsibility and authority ensures planning by the very people who are overseeing the doing. This is not the ivory tower approach so common when conditions were less complex. There is a challenge in delegation that only the insufficient or inadequate at any managerial level will reject.

A system that is devised to include all supervisory personnel in the planning phase of management is a system which compels performance.

Responsibility or functional accounting represents a great step forward in compelling enlightened planning through more meaningful and realistic budgeting or forecasting.

Inherent in any system of functional or responsibility accounting is the requirement that each member of management plan or forecast for his particular segment or element of the company.

Conversely, then, it should follow that he must account for or report back on any significant deviations from that plan. These briefly are the techniques of putting into practice the concepts of: (1.) before action planning, (2.) during action review, and (3.) after action analysis.

With these three concepts in mind, let us outline a system or plan, the principles of which would fit any organization.

Before action planning

Annual budget planning reports prepared on a pyramiding basis by organizational levels within a chain of command.

These reports would provide the means of coordinating the planning within the major elements of a company. Plans would be started and goals recorded so that prompt action could be initiated when deviations are noted. More importantly, it establishes an atmosphere of accountability—a responsibility to fulfill these goals and objectives.

The budget planning reports would consist of three main sections.

First, a Progress Section reviewing accomplishments for the past year and covering progress against plans established in the previous budget planning report requiring specific comment on each goal and objective previously set. Major accomplishments not anticipated in previous planning reports would also be included.

The second section would be the Planning Section. This would include a statement of plans and objectives, and goals, in certain predetermined areas for the coming year. Briefly, these areas would cover:

Performance goals, and performance measures to be installed or improved.

Anticipated methods and procedures changes.

Training and development activities required in the forthcoming year to assist in accomplishing goals and objectives.

The third section—the Budget Support Section—would be a narrative justification of the budgeted requirements for the forthcoming year.

Consideration would be given to the effect of levels of anticipated workload and current backlogs; on personnel requirements, and man-hour requirements —both regular and overtime—and their effect on expected labor dollars of expense. Also, consideration would be given to anticipated other-than-labor expenses such as discretionary expenses, maintenance, and other similar items.

These reports would be the basis for acceptance or rejection of the budget by top management.

The foregoing has presented a means of ensuring enlightened planning and budgeting by the individuals responsible for managing the business. Each manager would be given the opportunity to tell what he has accomplished in the past year, what they hope to do, what they think they can do, and what they

This report on pinpointing responsibility for deviations from the operating budget is a completed project of the A. G. A.-EEI General Accounting Committee, and was presented at the national conference in Washington, D. C.

plan to do in the coming year.

Having individuals put down their own plans by reporting compels performance. This leads us to the areas of: During-action review, and after-action analysis, through performance analysis reports.

This is not an entirely new concept but a systematic way of interpreting monthly data, both operating and financial. In essence the system would supply analytical, interpretive information to supplement the usual operating and financial data. In actual practice the reports would serve a dual purpose. In the longer-term annual picture, they would serve as a means for during-action review or control. In the shorter-term monthly picture, they would serve when appropriate as a means of analyzing and appraising completed action during the month or in the year to date.

The system would require the reporting back through the same channels outlined for the Budget Planning Reports.

It is very possible for reporting systems to flood higher levels of management with so many reports that they tend to defeat their own purpose. Time just won't permit the proper digestion of the potential reams of information inherent in the system.

The volume of information could be controlled by the application of the exception principle or, in other words, reporting by exception, as follows:

Reporting by exception consists of supplying each successive level of responsibility with an analysis and interpretation of performance which varies significantly from the normal level of operations. It involves more than a listing of variations, but rather includes the use of judgment in selecting items to be reported, in giving an adequate explanation and interpretation, and in recommending corrective measures.

Purpose of report

Its purpose is to conserve time and effort by:

1. Calling attention only to those existing or potential problems which cannot be remedied at lower levels.
2. Providing brief analyses and interpretations of the significance of the problems reported so that corrective action may be developed and initiated.
3. Providing information which might have a material effect on operations in other elements of the company or on company policy.
4. Eliminating all unnecessary material.

Effective application of the exception principle consists of three principal parts: (1) development and use of performance comparisons, (2) careful selection of items to be reported, and (3) adequate analysis and interpretation. These three parts are explained as follows.

1. Performance comparisons:

Reporting under the exception principle requires that management establish yardsticks to determine what constitutes a "normal level of operations." Among the yardsticks against which performance can be measured are standards, forecasts, and proper performance. Standards are the most reliable indicators, if they have been objectively and scientifically developed. When performance is compared with the appropriate yardsticks it is possible to distinguish operations which are above or below the normal level.

Where yardsticks cannot be established it will be necessary to rely on management judgment in deciding whether performance has varied from normal levels.

2. Careful selection:

At every management level it is necessary to select carefully the items to be reported. Ordinarily, operations falling within normal ranges will not be included. Operations both above and below normal levels should be reported if experience and management judgment indicate that the problems or information would be of value to higher levels of responsibility.

3. Analysis and interpretation:

In discussing the problems selected, the causes and the effects on past or future operations should be stated briefly, and remedial action recommended wherever possible.

Checklist—do's and don'ts

The following are characteristics of items which should be reported under the exception principle:

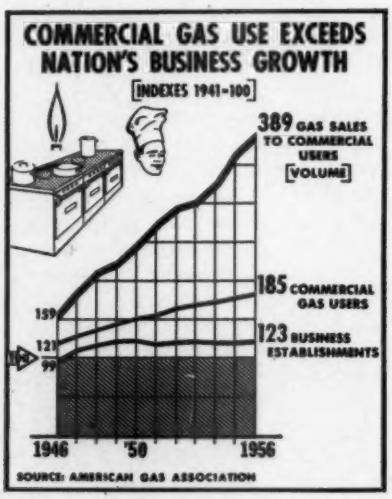
1. Operations above or below the normal range.
2. Problems which cannot be remedied at the reporting level.
3. Significant problems being solved at the reporting level, but requiring an extended period of time to complete.
4. Progress on longer range projects designed to correct operating problems.
5. Problems or proposed changes in one department affecting operations in other departments.
6. Situations with a material effect upon over-all company operations or policies.
7. Chronic sore spots.
8. Undesirable trends toward significant problems.
9. Data of particular or continuing interest to top management.

Under the exception principle, items with one or more of the following characteristics would not ordinarily be reported:

1. Operations falling within the normal range.
2. Routine problems being remedied promptly at the reporting level.
3. General information on operations.

This paper does not pretend to include all of the answers to the budgeting problem. It is designed to point up the fact that it has become one of management's most important responsibilities. It is the corporate operating plan and as such requires the full cooperation of all management.

Commercial sales rise



The number of commercial gas customers in the United States is growing at a faster rate than that of retail business establishments. Americans spend more than $17.5 billion a year on meals eaten outside the home, and 9 out of 10 of these meals are cooked with gas appliances

A.G.A. Industrial Gas School

will be held week of Sept. 9

The biennial Industrial Gas School sponsored by the A. G. A. Industrial and Commercial Gas Section will be held the week of Sept. 9 in the Penn-Sheraton Hotel, Pittsburgh, Pa.

The five-day school will provide basic training for new engineers and will serve as a refresher course for others in the sale and utilization of gas for industrial heat processes.

The course will include a series of technical lectures covering fundamentals of combustion, combustion systems, melting and heat treatment of metals, fuel applications in major industries, steam generation, liquid heating, instrumentation and protective devices, automation, air conditioning and heating, radiant spot heating and installation practices. Typical modern industrial gas equipment will be displayed and demonstrated.

This series of lectures was developed by the A. G. A. Sales Training Committee, W. A. Stermer, The Manufacturers Light & Heat Company, Pittsburgh, chairman, to cover as wide a field of industrial gas subjects as possible in a week's time. Eminent specialists in their respective fields have accepted the invitations to be lecturers at this sixth school session.

The Industrial Gas School is open to employees of gas companies, gas equipment manufacturers and dealers, present and prospective industrial gas customers. Registration will be limited to 150 and tuition is $45. Checks, payable to American Gas Association, are to be mailed with completed registration forms to Industrial and Commercial Gas Section, American Gas Association, 420 Lexington Avenue, New York 17, N. Y., before Sept. 1, 1957. Copies of the school program and registration blanks have already been mailed to Section members.

A block of single-bed and twin-bed rooms has been reserved at the Penn-Sheraton Hotel with rates from $8.00 to $9.75 per person per day. Hotel room and meals are to be paid by the students. Reservations will be made by A. G. A. upon receipt of the completed registration applications.

At 9:30 a.m. on Monday, September 9, the school session will be opened with a greeting from James E. Coleman, vice-president, The Manufacturers Light & Heat Company, Pittsburgh, and followed by an introduction to the school by Mr. Stermer. J. Robert Delaney, Section chairman, will preside the first day.

Groundwork for selling

The first lecture lays the groundwork for selling gas to industry. Then follows a discussion of the combustion fundamentals of various fuels.

The afternoon opens with a lecture on the plant survey which is also basic and necessary for a proposal or sales discussion with industry management.

Recently the Section issued two information letters on customer owned piping installation and suggested practices for the installation of gas equipment on industrial and commercial premises. These will be discussed at length by the past and present chairmen of the committee that developed these proposed codes.

Concerning insurance, a discussion on the fundamentals underlying loss prevention standards will be followed by a lecture on protective devices. After a question and answer panel, which will follow every session, there will be the traditional school reception and dinner.

Tuesday's sessions presided over by Mr. Stermer, will consist of a series of lectures on all the combustion systems that are used for industrial gas heating applications throughout industry for processing operations.

On the third day which will be presided over by Ralph L. Melaney, supervisor, Equitable Gas Company, Pittsburgh, the lectures will be devoted to the heat treating of steel, aluminum and magnesium alloys and a description of the various types of heat treating furnaces, their characteristics and saleable features. There will also be lectures on the hot forming of metals and nonferrous melting practices which will include a discussion on the use of gas for atomizing oil for firing open hearth furnaces.

W. E. McWilliams, manager, Industrial and Commercial Division, The Peoples Natural Gas Company, Pittsburgh, will preside on Thursday. The morning session will be devoted to

Four Pittsburgh utilities earn safety awards

For the first time, all four Pittsburgh gas companies have won accident prevention honor awards from the National Safety Council in the same year—1956. All four companies were instrumental in having A. G. A.'s safety course conducted in the Pittsburgh area last year. Safety directors displaying their awards are (l. to r.): Leo R. Nuhfer, Peoples Natural; Darwin E. Whipkey, New York State Natural; A. R. Kelliher, Manufacturers Light & Heat; and George M. Probst, Equitable

boilers. There will be lectures on boilers for small heating and process steam operations with sizing recommendations and the sales and application advantages of the packaged firetube boiler. Selling gas as a boiler fuel and a sales discussion of boiler conversions will conclude this series.

In the afternoon there will be several lectures on miscellaneous applications which will include one on central systems for air conditioning large buildings with gas, and another on sales and installation recommendations for heating industrial plants. One other lecture will point out the field applications of spot heating and will be about typical installations of infra-red burners for space heating and industrial and commercial processing operations.

Other miscellaneous applications will continue into Friday, the last day, on which Mr. Stermer will again preside and close the school. Opening the morning class, ovens will be discussed with a description of the principles, practices and designs of ovens used for industrial drying and finishing.

Gas heating operations and equipment in the volume food processes of baking, roasting, drying, smoking, canning and other volume cooking methods will be discussed under a general heading of food processing.

A very important industrial gas application is in the heating of liquids. The lecture on this subject will cover a description of immersion heating, external firing, submerged combustion and other methods of heating tanks.

While the school has covered many phases of gas uses with metals, it will be found that many applications require high speed equipment which will fit into production line timing. Special heating machines have been developed which will do this necessary heating at high speeds and will be the theme of a lecture on automatic heating machinery.

Another important field is the application of gas to brick, clay and glass manufacture.

There will be a lecture on the equipment available and the methods used to convert kilns to gas fuel.

Closing the last school session, Milton J. Firey of Baltimore will again give the assembled students a dynamic sales and inspirational talk. This year he has announced that the title of his address will be, *All I Know Is What I Read in the Papers.*

The lecturers, instructors, moderators and others who will speak, will be: Henry Apthorp, The East Ohio Gas Co., Cleveland, Ohio; Richard A. Brackett, The Spencer Turbine Co., Hartford, Conn.; T. J. Brennan, Public Service Electric and Gas Co., Newark, N. J.; Lowell F. Crouse, Maxon Premix Burner Co., Muncie, Ind.; Robert L. Davis, Baltimore Gas and Electric Co., Baltimore, Md.; J. Robert Delaney, The Cincinnati Gas and Electric Co., Cincinnati, Ohio; Maurice J. Dewey, Dewey Gas Furnace Co., Detroit, Mich.; Milton F. Firey, Milton J. Firey & Associates, Baltimore, Md.; Louis H. Flanders, Jr., Factory Mutual Engineering Division, Norwood, Mass.; Paul A. Furkert, Gas Appliance Service Inc., Chicago, Ill.; William R. Gartz, The Peoples Natural Gas Co., Pittsburgh, Pa.; Herman Gehnrich, Gehnrich & Gehnrich, Inc., Woodside, Long Island, N. Y.; Jack Huebler, Surface Combustion Corp., Toledo, Ohio.

M. M. Jenkins, Pittsburgh Forgings Co., Coraopolis, Pa.; Norris D. Jones, Ames Iron Works, Inc., Oswego, N. Y.; Gladstone Keir, The C. M. Kemp Manufacturing Co., Baltimore, Md.; Owen Kuhen, Carrier Corp., Syracuse, N. Y.; R. C. LeMay, Selas Corporation of America, Dresher, Pa.; A. V. Leudemann, Mears, Kane, Ofeldt, Inc., Division of S. T. Johnson Co., Forest Hills, Long Island, N. Y.

Edwin S. Mack, Signal Mountain, Tenn.; George E. Marble, Michigan Consolidated Gas Co., Detroit, Mich.; W. E. McWilliams, The Peoples Natural Gas Co., Pittsburgh, Pa.; Ralph L. Melaney, Equitable Gas Company, Pittsburgh, Pa.; Robert A. Modlin, The East Ohio Gas Co., Cleveland, Ohio; Stanton T. Olinger, The Cincinnati Gas and Electric Co., Cincinnati, Ohio; Stewart C. Parker, The Peoples Gas Light and Coke Company, Chicago, Ill.; R. J. Reed, The North American Manufacturing Co., Cleveland, Ohio; M. C. Reeves, Equitable Gas Co., Pittsburgh, Pa.; J. V. Richards, New Jersey Natural Gas Co., Asbury Park, N. J.; F. C. Schaefer, American Gas Furnace Co., Elizabeth, N. J.; John Sellors, Jr., Bryant Industrial Products Corp., Cleveland, Ohio.

H. M. Short, Aluminum Company of America, Pittsburgh, Pa.; W. A. Stermer, The Manufacturers Light and Heat Company, Pittsburgh, Pa.; L. D. Sibley, Electronics Corporation of America, Cambridge, Mass.; Gene Skerkoske, Eclipse Fuel Engineering Co., Rockford, Ill.; E. L. Spanagel, Rochester Gas and Electric Corp., Rochester, N. Y.; Lewis W. Sutherland, Surface Combustion Corp., Columbus, Ohio; and Marvin E. White, The Ohio Fuel Gas Co., Athens, Ohio.

A.G.A. report furnishes scientific and legal foundation for orifice meter measurement

Gas measurement advances told

By JAMES L. GRIFFIN

Superintendent of Measurement
Northern Natural Gas Company
Omaha, Nebraska

After the orifice meter had been generally adopted by the industry as a satisfactory device for the measurement of large volumes of gas, it was found that slight discrepancies occurred when two meters with different pressure taps were connected in series and measuring the same gas.

To remedy this situation, the operating companies prevailed upon the American Gas Association to investigate the subject. The problem was passed to the Technical and Research Committee which, in 1924, organized a subcommittee now known as the Gas Measurement Committee. This committee was charged with the responsibility of carrying on an investigation and preparing a report. In addition, the A. G. A., the American Society of Mechanical Engineers, U. S. Bureau of Standards and the U. S. Bureau of Mines participated in this work.

The results of the labor of these various groups ultimately appeared in the form of Gas Measurement Committee Report No. 2, presented to industry in May 1935.

As additional gas reserves were developed, longer and larger pipelines were built and the industry found need for further data that would permit measuring gas through orifice meter tubes of a diameter larger than those included in Report No. 2, as well as with meter tubes made with heavier walls, with a corresponding smaller internal diameter for operating at high pressures.

In response to industry's request for such data the A. G. A. in conjunction with the United States Bureau of Standards and the American Society of Mechanical Engineers again reviewed the previous work, conducted additional research, particularly at the 30" test set-up at Refugio, Texas, and published a report in April 1955 known as Gas Measurement Report No. 3 which included orifice factors for large diameter pipe and different wall thicknesses, other related factors, and further refinements for large volume gas measurements.

Gas delivery contracts relating to measurement have been expanded, not necessarily changed says the author

Gas delivery contracts relating to measurement have been expanded, not necessarily changed. Details were formerly left to measurement departments but now the legal document frequently sets out in detail what must be done. A. G. A. Report No. 3 furnishes the scientific and legal foundation for orifice meter measurement today.

While the present type mercury manometer orifice meter gauge has remained practically unchanged in recent years with the exception of the type of material used and the manufacturer's "know-how," work is continually being done to improve present instruments and to develop new ones.

There are now available instruments that operate controls as well as record differential and static pressures, ones that will transmit and reproduce duplicate charts at some distantly located point, ones that will totalize the flow data and transmit such totals to a distantly located point or print the results on a tape.

Growing in use is a diaphragm-type orifice meter gauge that permits changing the differential range by means of replaceable "range springs." The accuracy of these meters is less disturbed by non-gaseous elements, such as liquid hydrocarbons, than is the case with mercury type meters.

Experiments are continuing on an instrument that will correct automatically for all variables in the present formula. Such an instrument is presently referred to as a "mass flow meter," with the resultant volume expressed in cubic feet or pounds per period of time.

There is now a laboratory model of an orifice meter that uses a strip chart and an integrator for calculating volumes from a strip chart.

One of the essential factors to be determined for use in computing gas flow

This paper was presented by Mr. Griffin at the joint A. G. A.-PCGA Transmission Conference in San Francisco.

is the specific gravity of the gas as compared with air. In 1930 a specific gravity balance of the Edwards principle was presented to the industry and this type of apparatus has been in general use since that date. With gas being collected from divergent sources of different specific gravities and then combined in a common stream, the spot tests obtained by the gravity balance did not suffice when high degrees of accuracy were essential.

To remove the discrepancies caused by varying specific gravities, recording gravitometers have been designed that give results accurate to ± 3 in the third decimal place when compared with the standard balance or with standard gases that are obtainable from the U. S. Bureau of Standards with certificates of accuracy. A recently growing practice is to house these instruments in air conditioned rooms to improve performance and reduce the need for attention.

Weights and measurements are by law tied to standards established by Congress and administered by the U. S. Bureau of Standards. In addition to the national standards, a number of states have legally defined the cubic foot of gas at a stated base pressure, temperature and deviation factor of 1. at base conditions. These standards for gas measurement established by the various states are not necessarily the same as the national standard for a cubic foot, the primary difference being in the base pressure and method of correcting for compressibility when gas is measured at higher pressures. One of the formerly ignored or assumed factors was for correcting the effect of supercompressibility.

As metering pressures increased, the effect of supercompressibility was more forcefully brought to the industry's attention and factors to correct for this effect were developed through a special A. G. A. research project and included in Measurement Report No. 3.

While apparatus for the testing of gas to determine its supercompressibility and effect on measurement are readily available, the cost of such apparatus is high, requiring skilled operators and considerable time to obtain the supercompressibility factor. Measurement Report No. 3 contains methods and tables from which this factor may be obtained when the gas analysis is known. Factors obtained by this method compare to within two tenths of one per cent with factors obtained by the testing apparatus.

Instruments for automatically determining and recording hydrogen sulphide, carbon dioxide and water content have been developed and are presently being used to safeguard the quality of pipeline gas. These instruments will produce duplicate charts at some distant location, operate alarms, signal lights and control valves to either shut off gas supplies entirely or divert the gas stream from the pipeline when the diluent content reaches a predetermined amount.

With the possible exception of the petrochemical industry, which converts natural gas into other products, industrial customers are buying heat. The spot checking of heating values with the old Junkers type flow calorimeter has given way to continuous recording calorimeters. Testing and calibrating these instruments has been simplified, and the time periods extended between inspections with a standard gas supported by a U. S. Bureau of Standards certificate of heating value. Several companies air condition the rooms where calorimeters operate as it has been found that controlled temperatures improve the machine's performance and accuracy.

Analysis often requested

Designers and users of gas burning equipment frequently request analysis of the gas that is proposed for use in their particular equipment. Formerly such analysis was obtained by a combination of selective absorption and combustion from which the various components could be calculated or by fractional analysis. The development of a low priced mass spectrometer has made it possible to obtain the fractional analysis in a matter of minutes as compared with hours for other types of equipment.

The experimental work conducted in the preparation of Report No. 2 and No. 3 brought to light the need for making orifice plates of better steels that would longer retain a true, sharp edge. Stainless steel orifice plates are now in wide use. Special orifice fittings have been developed where plates can be removed for inspection and replacement with a minimum of labor. By the use of weld-ends on the upstream side, such orifice flanges and fittings can provide an uninterrupted internal wall surface from the outer end of the inlet meter tube to the section adjoining the orifice plate.

Orifice fittings that permit orifice changes with a minimum of effort and without interrupting gas flows are a convenience over the flange union and are increasing in use.

Research work is being conducted to determine the effect of meter run surfaces on gas measurement. Tests on this are under way at U. S. Naval Boiler and Turbine Laboratory at Philadelphia, under supervision of A. G. A. The findings of this research may lead to a more precise control and closer tolerance in the manufacture of meter tubes.

Another of the current research projects being conducted by A. G. A. is in the study of the pulsation problem where orifice meters are operated in the vicinity of compressor stations. This project is now in progress at Southwest Research Institute. It is hoped that this will lead to practical methods of isolating meters from these pulsations or possibly a formula for correcting the errors from this source.

The present supercompressibility tables in Report No. 3 are limited to maximums of .75 specific gravity, 5 per cent carbon dioxide, 12 per cent nitrogen and 3000 psig. As there are instances where natural gas metering is involved in conditions exceeding these limits, A. G. A. is studying the extension of these tables to much wider limits.

The 1957 A. G. A. Gas Measurement Committee has a subcommittee studying the possibility of another project on the disturbance effect of upstream pressure reducing valves on orifice measurement.

Another project of the Gas Measurement Committee is the preparation of a gas measurement manual for which a need is felt in the industry, particularly in the training of measurement personnel and as a guide to standard or widely used practices.

Considerable advancement has been made in recent years in the use of electronic tabulating machines in the calculating of meter volumes from the charts and the making up of reports and data for billing. This has worked to shorten the time between receiving charts and reporting volumes and tends to reduce the interval between the close of the billing period and the date the customer receives his bill.

The basic principles and methods of gas measurement have not changed. Several new methods have been proposed such as artificially set up electric currents and sound waves, but these methods still require much research before being approved for commercial use. Our greatest activity has been proving and expanding tried and true methods.

Construction

(Continued from page 9)

exist with a resultant increase in gas customers.

Underground storage facilities will be increased by $352 million during the next four years, an increase of 80 per cent in the investment in these facilities so important to permit more effective service to heating customers and higher load factors for pipeline suppliers.

Natural gas construction expenditures during 1956, amounting to $1.47 billion, included expenditures made for the completion of two major pipeline systems by Pacific Northwest Pipe Line Company and American Louisiana Pipe Line Company.

Attempts have been made to determine, from gas companies, the method of financing the anticipated 1957-1960 construction program. With the current status of the money market a large proportion of companies were unable to provide such estimates, and even for those which did provide them, the expectations are, of course, subject to substantial modification depending upon future changes in the cost of money.

At the present time it appears likely that 28 per cent of the necessary funds for the four year construction program will be derived from internal sources, 53 per cent from debt issues, and the remaining 19 per cent from new equity.

Burner

(Continued from page 17)

serving that noise of operation was primarily a function of the degree of aeration taking place, any design modification which tends to increase the amount of air entrained by the gas jet usually results in an increase in the noise of operation.

In normal operation, a circular "dead area" appears directly over the orifice under the center of the target in which no burning takes place. The boundary of this "dead area" represents the flame front at which the outward flow velocity of the air-gas mixture is in unsteady equilibrium with the flame velocity of that mixture. Apparently, the chief cause of noise of operation is the instability or rapid vibration of the flame front. Because noise of operation presents one of the greatest problems of design, extensive discussion is given in the bulletin to those factors influencing such performance. Noise of operation, however, can be reduced to an acceptable level through proper design.

Flat, circular impingement targets with diameters ranging from 2 inches to 10 inches were used in the Laboratories study. Conical targets with included angles of 90, 120, and 150 degrees were mounted in both upright and inverted positions over the target. A number of experimental flame retention devices were incorporated with the targets.

In a typical experimental setup, the impingement target was suspended at a given distance above the orifice, and various operating characteristics of the burner were observed under open room conditions. They included the operating noise level, the size (radius and height) of the flames, air-gas mixture under the target at the center, temperature of the target, yellow tipping tendencies, and flame extinguishment points.

Using the information developed, experiments were performed to demonstrate the feasibility of using impingement target burners in contemporary appliances. Application of experimental burners in a gas storage water heater, domestic gas range top section and a central heating furnace were made with varying degrees of success. The study showed that this type of burner, with proper design, can be applied successfully to most types of gas appliances for use with slower burning gases.

Bulletin 75 was authored by J. C. Griffiths and E. J. Weber of the Laboratories staff. Copies of the bulletin are available at $2 each from the A. G. A. Laboratories, 1032 East 62nd Street, Cleveland 3, Ohio, or from the Association Headquarters, 420 Lexington Avenue, New York 17, N. Y.

Author says competition can regulate price of natural gas

There appears to be no decisive reason why market competition cannot generally regulate the field price of natural gas in the public interest.

That is the conclusion of James W. McKie, professor of economics and business administration at Vanderbilt University, in a recently published 46-page booklet entitled *The Regulation of Natural Gas.*

Published by the American Enterprise Association, 1012 14th Street, N. W., Washington, D. C., the booklet is a timely study in which Professor McKie disentangles the economic principles from a conflict of interests "to determine whether an enlightened public policy can best serve society by regulating natural gas as a public utility or by leaving it to the forces of the open market."

In arriving at his conclusion, the author explores the concept of public-utility regulation, the highly competitive characteristics of the natural gas industry, and the difficulties which would be encountered in establishing an equitable rate-base to provide a fair rate of return. He explains the structure of the industry, the relation of natural gas to other fuels, and the history of pipeline contracts. Objectively, he analyzes the Supreme Court decision in *Phillips Petroleum Company v. Wisconsin* which subjected the field price of natural gas to Federal Power Commission control, and the various attempts in Congress, notably the Harris-Fulbright and Harris bills, to exempt natural gas from such regulation. The booklet is prepared in layman's language without loss of scholarly precision.

Although many of the facts will undoubtedly be well known to top industry executives, their logical presentation and integration into a uniform treatment may make the booklet useful to middle and lower management.

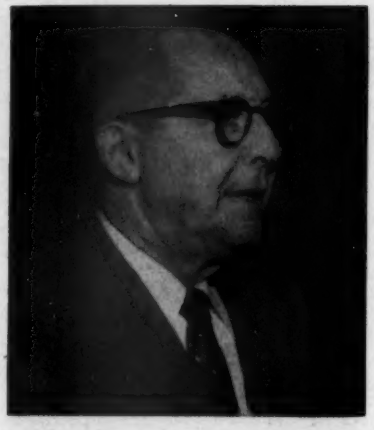
'World's largest world' stores gas in Savannah, Ga.

WHAT IS BELIEVED to be the "world's largest world" stores gas for the citizens of Savannah, Georgia, and helps teach geography to Scouts and other youth groups.

The steel hortonsphere, shown on this month's cover, stores 600,000 cubic feet of gas at 75 psi for the supply lines of the South Atlantic Gas Company. The surface of the sphere is painted to represent the world at a mapping scale of one foot to 750,000 feet. It is 60 feet across and 189 feet around at the equator. A 15-foot Scoutmaster's pointer is 2,000 miles long.

The Chicago Bridge & Iron Company built the hortonsphere.

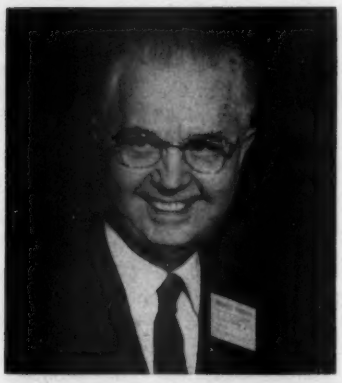
Half an acre at the base of the globe will be landscaped with a decorative brick wall for educational and sightseeing junkets.



Roger J. Karcher, chairman of the 1957 Conference, was the presiding officer

A. M. Schultz, Minneapolis sales manager, will head 1958 Conference

A. G. A. Managing Director Clar... Stackpole reviewed national pi...



C. H. Zachry, president of A. G. A., compared gas past with its future

The Rev. Carl S. Winters str... the value of persistence in s...

'Agonizing reappraisal' of gas industry's competitive situation is sought at sales conference

Renew sales efforts, Midwest Council told

Calls for an "agonizing reappraisal" of the gas industry's competitive situation, and for renewed sales offensives on all fronts, sounded the dominant themes at the 30th annual Midwest Gas Sales Conference held May 20-22 at the Edgewater Beach Hotel in Chicago.

Approximately 700 salesmen, sales managers, home service representatives and manufacturers' representatives from 13 states heard a series of outstanding speakers from both inside and outside the gas industry. The meeting was presented by the Midwest Regional Gas Sales Council and sponsored by the A. G. A. Residential Section.

Roger J. Karcher, Council chairman, presided over the conference which he opened on Monday morning with a welcome to the delegates. Greetings also were extended by Neal Lang, vice-president, Edgewater Beach Hotel.

Thomas H. Lane, Lennin & Newell, told A. G. A.'s future advertising plans

Remick McDowell, The Peoples Gas Light & Coke Co., discussed public relations

Air conditioner is vital to gas utility operation, Servel's R. K. Eskew stated

Philco's E. A. Nash stressed importance to industry of selling gas refrigerator

Gas laundries lead electric competitors in 14 areas, Philco's N. R. Millard said

Gas industry salesmen must understand the customers' needs, said A. T. Carrow

The first major address was delivered by A. G. A. President Clare H. Zachry. Entitling his remarks *The Blue Flame Marches On,* Mr. Zachry compared the gas industry's past record with present accomplishments and future prospects.

Only 20 years ago, Mr. Zachry recalled, the gas industry's assets were valued at $5 billion dollars. Some 16½ million customers were spending $800 million a year for gas served through 275,000 miles of mains and pipelines. Today, the gas industry already has $18½ billion in assets, sales of $4 billion, and more than 30 million utility customers served by mains and lines long enough to encircle the world 21 times.

For 1965, he offered these objectives: assets of $34 billion; revenues, $7 billion; net income, $1 billion annually; 38½ million customers.

However, Mr. Zachry warned, these gains, unlike the modern gas range, will not be "fully automatic." They must be earned, he said, with effort—particularly selling effort. Every utility must sell its company, its product, gas, and all the appliances that utilize this product.

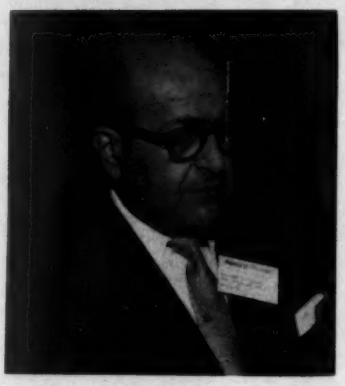
Growth in proven gas reserves provides us with a plentiful supply of fuel, he said. To sell it will require integrated efforts by all members of the industry. Furthermore, it means selling now the products that we have now, including air conditioning equipment. We cannot afford to wait for a perfect solution to our problems. It is better to do something, and have it turn out imperfectly, than to do nothing. Everyone in the gas industry must become a salesman, Mr. Zachry said, and sales programs must be action programs aimed at definite objectives. Appliance dealers, builders and architects, and professional decorators must be wooed and held as friends of gas. Determination to capitalize on our advantages, and unity of effort, will be the keys to success, he concluded.

Thomas H. Lane, senior vice-president, Lennen & Newell advertising agency, repeated for the Mid-Western gathering his presentation on A. G. A. advertising previously presented at the Eastern Sales Conference in Pittsburgh. He stressed again the great success and effectiveness of the "Playhouse 90" television program. In concluding, however, he once again repeated that advertising alone cannot do the sales job—only individual salesmen at the actual point of sale can complete the process.

Walter G. Ullman, vice-president, The Siegler Corp., spoke for *Old Fashioned Selling Versus the Present Day "Rat Race."* Mr. Ullman defined old fashioned selling as the forthright effort

F. N. Seitz, Southern Counties Gas, told of range load importance

Banker George Mitchell reported outlook good in most business areas



Siegler's W. G. Ullman favored "old-fashioned selling over rat race"

R. H. Mahnke told how LP-Gas expands market; called for cooperation

to convince the customer that you have a "better mousetrap" and that he owes it to himself to own it. It means selling value over cost, quality over price, selling benefits and customer satisfaction, he said. By contrast, the "modern rat-race" is everything opposite—selling gimmicks and deals, low prices and discounts. It is an attempt, he said to meet competition merely by "sharpening a pencil," rather than by honest effort and ingenuity. He included motivation research and other psychological selling devices in this "bag of tricks."

There is no way, Mr. Ullman said, to achieve automatic sales production. A basic decision must be made at the management level of utilities and manufacturing companies, he said, to rededicate all efforts to the "three P's" of selling—profit, promise, and performance. The dealer must be given an adequate profit, the customer must be given a promise of benefits, and performance must realize these benefits. If sold this old-fashioned way, the public will be willing to pay the price.

On Monday afternoon Frank N. Seitz, vice-president, Southern Counties Gas Co., led off with a talk on *Automatic All the Way*. Mr. Seitz hit out at the tendency to dismiss the range load as not worth the money and effort required to promote it, and to rely on the heating load for business. He pointed out that dependence on the heating load made the gas business subject to the vagaries of the weather and hence unstable. After establishing the importance of the cooking and water-heating load, Mr. Seitz counselled that now is the time to begin for preparing for the January 1959 switchover to completely automatic ranges under A. G. A. requirements. Customer acceptance must be obtained now, he said, and dealer apathy overcome immediately. Otherwise, he said, manufacturers may defect from the Blue Seal standard and a blow be dealt to the whole requirements program.

To accomplish this acceptance, *Automatic All the Way* must be made the "buy" word of the public, and the "sell" word of dealers and salesmen. We must from now on, he said, forget that there is any range to be sold other than the matchless, completely automatic range.

Remick McDowell, vice-president, The Peoples Gas Light and Coke Co., told the gathering of *Progress in Gas Industry Public Information*. Public relations, he said, is an integral part of the sales team which includes promotion and advertising as well as direct salesmanship. Knowledge of gas and the gas industry by the public creates confidence and prepares a favorable climate of opinion necessary for successful sales activities. Mr. McDowell outlined the ways in which A. G. A. and local utilities are working to obtain better public understanding of gas and the industry. These methods include public relations workshops, employee education and information, newspaper and magazine publicity, pamphlets and brochures, publicity support for promotions, and investor information.

Chester S. Stackpole, A. G. A. managing director, summarized salient facts in the national picture. The necessity of intensified research, he said, was shown by the fact that of all research funds spent in the U. S. last year, 20 per cent was spent by the electrical industry. As a result, an average of 1.5 completely new appliances has been brought out each year. To meet this competition, we must stop talking about research and act. We also must make the most of what we have to offer now, rather than waiting for perfect solutions.

Mr. Stackpole stressed that money put into selling, advertising and promotion is not cost money, but investment money. Building the market is fully as

important as building capital investment. He urged that sales managers sell this point of view to executives.

He reported that three-quarters of the needed funds for next year's television program already had been subscribed. He urged utilities to use all of the methods for capitalizing on advertising and promotion, and told the salesmen that they were the people who could turn great expectations into realities.

John H. Brinker, general manager, Permaglas division, A. O. Smith Corp., told the delegates to *Beware of Marketing Experience*. In view of the rapidly changing character of today's market, Brinker warned that there were dangers in relying on past experience. (Excerpts from Mr. Brinker's talk begin on page 13.

On Tuesday, A. T. Carrow, manager of sales, Cribben & Sexton Co., also asked if gas industry salesmen understand their customers. He said that today they are spending for wants, rather than needs, and characterized them as "skilful, choosy, cultural-hungry individuals." The fundamentals, such as dependable performance, are taken for granted, and it is the extras which sell appliances. He stated that an important selling factor was woman's desire to express her individuality in her home, and that she must therefore be offered a choice. The range is the spearhead for the whole family of gas appliances, he said, and all should be sold with warmth and color in sales messages.

Granting the size of the competition, Mr. Carrow compared the electrical industry and its advertising to the dinosaur. By exploiting the natural advantages of gas, we can win. In the new Northwest market, he reported that automatic top-burner heat control was most important in moving ranges, but said that other advantages of long standing should not be neglected. These advantages of our product must be keyed to consumer wants through psychological selling, he added.

R. H. Mahnke, vice-president, LP-Gas Association, described the role which the rapidly growing liquefied petroleum industry is playing in expanding the gas market. He called for cooperation between utilities and dealers, pointing out that LP-Gas service could reach and hold millions of customers now waiting for utility gas. He compared benefits of such cooperation to the boost given the television industry when RCA released patents on its picture tube to its competitors for the public good.

George W. Mitchell, vice-president in charge of research, Federal Reserve Bank, Chicago, gave an illustrated analysis of coming economic trends. The business outlook in general was favorable, Mr. Mitchell stated, but contained areas of possible fluctuation and resistance. One such area is that of durable consumer appliances, he said. Natural instability in this field is likely to be accentuated by growing sales resistance due to the fact that wartime-created demand had been nearly filled. His conclusion was that only "spectacular" selling could overcome this specific resistance.

On Wednesday, Chairman Karcher opened the session by introducing next year's chairman, A. M. Schultz, Minneapolis Gas Co.

Norman R. Millard, manager, home laundry sales, Philco Corp., speaking on *The Home Laundry Challenge*, pointed out that while nationally gas laundries had only one-third of the market, there were 14 local markets where gas laundries were doing far better. In Chicago, gas laundries led electric. In Kansas City, gas laundry sales were six to one over electric. Such examples prove, he said, that the same pattern can be established anywhere. Recent improvements in gas laundries offer a new opportunity by increasing their superiority. At the same time, he said, the load-building value of the gas laundry has increased. He pointed out that a broad mass market exists for this relatively high-priced appliance, due to the fact that the convenience and labor-saving offered make the value attractive to today's busy housewife, regardless of income level.

Now is the time, Mr. Millard said, to aggressively sell and promote the gas combination washer-dryer, to replace both gas and electric separates. Loss of the initiative at this time might mean losing it for good. He assured salesmen that manufacturers would assist their sales efforts to the utmost.

E. A. Nash and Robert K. Eskew of Servel, Inc., repeated for the Midwest audience their remarks previously delivered at Pittsburgh, in which they stressed the importance of selling the gas refrigerator and the gas air conditioner. The refrigerator, Mr. Nash said, has become a symbol in the battle of fuels. The air conditioner, Mr. Eskew told the delegates, is vital to the economic operation of gas utilities because it levels out the winter-summer load. Greater sales efforts are needed for both.

The conference was concluded with an address by the Rev. Carl S. Winters, minister, First Baptist Church, Oak Park, Illinois. The Rev. Winters stressed the value of informing the public, and of persistence in selling. He reminded the gas men that in selling superior products they were performing a great service through raising the standard of living. He extolled a point of view in which the merchandiser seeks a small present profit to himself, and an endless profit to the customer.

The next Midwest conference will be held in Chicago, May 19-21, 1958.

Regan and Heilig join Hall of Flame

At a special ceremony, pins and certificates of life membership in the Hall of Flame were awarded to R. E. Regan (2nd from l.), Gas Consumers Service, and J. T. Heilig (2nd from r.), Savory Equipment, Inc. Representing A. G. A. are H. S. Walter (l.), commercial promotion manager; M. A. Combs, Industrial and Commercial Section secretary; and Ral Murray (r.), assistant Section secretary

Recoverable gas

(Continued from page 12)

crease for the next decade at an average rate approximating 4.9 per cent a year. Figure 5 traces the growth trend since 1920 and includes the projection to 1966.

Since 1920 the marketed production of natural gas has grown at an average rate of 7.2 per cent a year. The penetration of new markets made possible by a rapidly expanding pipeline network pushed the average annual growth rate up to 9.5 per cent in the postwar period. But, as cited earlier, end-use studies indicate such growth cannot continue. It is our view that the coming decade will see demand for natural gas increase at an average rate of 4.7 per cent per annum. Figure 6 illustrates past trends and our projection to 1966.

In judging any particular natural gas project, it is customary to test the adequacy of the gas supply owned or controlled under contract. In approving new projects, the Federal Power Commission generally requires a 20 years' supply, and financing is often placed on a 20-year basis. For the immediate future, then, the industry looks to the country's proved reserves.

The American Gas Association's Committee on Natural Gas Reserves has found proved reserves of the country at the close of 1956 to be 238 trillion cubic feet. This is equivalent to 22 times 1956 production. With the great expansion in pipeline construction during the past decade, this ratio of reserves to annual production, or net withdrawals from reserves, has been decreasing. See Figure 7.

Ten years ago reserves were 32.5 times annual production. As the gas business continues to expand, this ratio will no doubt continue to decline moderately. A further decrease in the reserves-to-production ratio even below 20 should not be alarming so long as additions to reserves substantially exceed production. The proved reserves comprise only a small part of the total future supply—the more important part is that which is to be discovered in the future. It is the continuing exploration for additional reserves that is so necessary to keep the gas business on a sound basis and prepared for a long-range future existence.

The additions to proved reserves, as the result of discoveries, extensions of old fields and revisions of prior estimates, are estimated annually by the A. G. A. Committee on Natural Gas Reserves. For the last ten years such additions have averaged 2 cubic feet per cubic foot of gas withdrawn by production. See Figure 8.

For the year 1956 this finding rate was 2.3. With the exception of 1954, when the amount reported for additions was distorted by unusual downward revisions of prior estimates, the finding rate has been remarkably constant. In this respect, the natural gas industry is in a more favorable position than the crude oil producers. The finding rate for crude oil has averaged 1.41 barrels added per barrel produced for the last ten years and for 1956 was only 1.14. The R-P ratio for crude oil is only 11.6 vs. 22.0 for gas. One reason for the more favorable position of the gas industry is that it has taken a great many years for the pipelines of the country to be extended to distant markets and thus build up consumption to a normal proportion of the large gas supplies in the field. Compared on a Btu basis, the proved reserves of natural gas amount to 140 per cent of the country's crude oil reserves, whereas the consumption of gas is only 55 per cent of that for oil.

Natural gas production has been growing at the rate of 9.5 per cent per year during the past decade of extensive expansion. For reasons previously outlined, we expect this rate to slacken and the reserves-to-production ratio of 22 to decrease further. To maintain a ratio of 20 with increasing production of 5 per cent per year would require additions to reserves of 2 cubic feet per cubic foot produced. But, if the R-P ratio is decreasing and/or the growth declines below 5 per cent per year, the required finding rate will become less than the 2-to-1 ratio. The growth forecast in Figure 7 requires an average of 23 trillion cubic feet per year to be found during the next decade, or a total of 230 trillion cubic feet—very nearly our present proved reserves. This is a large order, but it will require an average finding ratio of only 1.65 and, in view of the consistent discovery performance for the past decade, we feel that this forecast can readily be attained.

Our forecast of demand and supply for the next decade is shown in Table 2.

For the country as a whole it thus appears that the industry is well prepared to find the new reserves required for our forecast of growth in the next decade. Of course, new reserves are not found where they are consumed and there will be extensive increases in pipeline facilities needed to bring the new gas supplies to be found in the Southwest to the great consuming areas of the North, the Northeast and the Pacific Coast. But that is what pipelines are for, and the required new gas supplies will not be attained without considerable and increasing cost.

The industry in 1956 drilled 58,000 wells for oil and gas and the rate of drilling is estimated to increase to some 87,000 wells by 1966, requiring the completion of around 735,000 wells during the next decade. These will be completed at sharply increasing costs. As oil and natural gas become more difficult to find—and the decreasing finding rate for oil points this out—wells need to be drilled to greater depths. Structures of lesser possibilities of success must also be tested. For example, an extensive program of exploration and development is being carried on to the deep formations along the Gulf Coast and offshore, where drilling is proceeding to great depths in tidal waters 100 feet and more in depth, 40 miles and more from land.

These are expensive operations and will justify high prices for gas at offshore wells plus increased transportation costs. The growing effort required to find new reserves is illustrated in Figure 9.

In the case of oil it may be noted that exploratory drilling per unit of reserves added has increased 130 per cent in the last eight years. But the dollar cost has risen at an even greater rate than shown because the drilling costs per foot increase with depth. Without attempting to solve the complex problem of what prices should be accorded gas producers and explorers, it is obvious that they face increasing costs.

The finding of both oil and gas is accomplished by exploratory drilling, principally by the drilling of wildcat wells. The results of such exploration have been carefully examined and reported for 20 years by the American Association of Petroleum Geologists' Committee on Exploratory Drilling. This Committee was organized and headed by Dr. F. H. Lahee until his recent retirement. In the period 1944-49 a total of 20,478 wildcat wells were

drilled. After seven years of production history, Dr. Lahee now reports that only 1,991 of these wells were commercially successful. In other words, only one in 10.3 wildcats was successful.[d] And only one in 42 discovered an oil field with as much as 1,000,000 barrels of recoverable reserves. He had previously stated: "Roughly speaking . . . a field having an ultimate recovery of 1,000,000 barrels is, on the average, near the economic limit."

This is the kind of business the courts say should be regulated on the basis of prudent investment. We should say no more as to the need for a new Gas Law. But one thing is certain—either the explorers who will find new gas supplies must be assured that they will really profit by their efforts, or the gas consumers won't get the growing quantities they want.

In the oil business increasing costs are forcing many producers, large and small, to foreign fields for cheaper sources of supply—to Venezuela, the Middle East and the Far East. Gas producers who supply domestic markets are limited. They can go no farther than Canada and Mexico. On the other hand, they have no Suez problem.

The total future supply of natural gas consists of the 238 trillion cubic feet presently proved plus the large but unknown quantities to be discovered in the future. The latter cannot be estimated. The best that one can hope to foresee from present evidence is a minimum figure which will probably prove to be too low, but which may provide a guide to management and some assurance to consumers and investors.

In 1950 the senior author, while addressing your Association, forecast that the total future supply would exceed 500 trillion cubic feet.[e] Since then the proved reserves have increased from 180 to 238 trillion; production has grown from 6.2 to 10.8 trillion; exploration offshore along the Gulf Coast has been highly favorable; and the rate of finding gas compared with finding oil has risen substantially. Thus, the old prediction is proving to have been decidedly too conservative.

Several estimates have been made of the ultimate crude oil reserves to be recovered in the United States. Lewis G. Weeks, chief geologist, Standard Oil Company of New Jersey, for many years has carried on extensive studies of the geologic characteristics of the source beds and reservoir rocks where oil and gas are found in the sedimentary basins of the United States and the world. To judge the potential of future discoveries in areas yet to be explored, he has compared the characteristics and production performance of existing oil and gas fields, area by area, with the geologic nature of other sedimentary basins that may be considered searching ground for new fields. In 1947 Weeks published an estimate of 110 billion barrels of ultimate recovery for the United States exclusive of offshore possibilities.[f] By 1952 he indicated that his 110 figure could be conservatively increased by 50 per cent to 165 billion. He now feels that for the United States, including offshore, the ultimate will exceed 200 billion barrels.

Our associates, Messrs. Hill and Hammar,[b] have used a new technique in estimating ultimate reserves for each of the important producing areas of the United States which results in slightly over 200 billion barrels ultimately recoverable by present methods. The Bureau of Mines estimates in a very general way that 300 billion is a reasonable assumption.[g] Considering such other estimates with their own, Hill and Hammar have "accepted as plausible" a minimum ultimate recovery of 250 billion barrels, including increments by secondary recovery and future improvement in production methods.

There are reasons for expecting that increasing proportions of gas to oil will be found at greater depths, including (1) a greater degree of natural refining in place at the high temperatures and pressures encountered in deeper wells and (2) larger quantities of gas in place per cubic foot of reservoir space at greater depths. Because of the physical factors of compressibility and the occasional occurrence of abnormally high pressures in deep wells, a cubic foot of reservoir space at 20,000 feet may contain approximately twice as much gas, measured at the surface, as found at 5,000 feet. Whatever the cause, the facts show a rise from 4.1 Mcf of gas per barrel of oil reserves found in 1947-49 to 6.5 Mcf per barrel found in 1954-56, as shown in Figure 10.

The ratio of Mcf/bbl. of reserves added cannot be applied to that part of the estimate of recoverable oil comprising increments by reason of secondary recovery and improved recovery. For gas, we cannot base calculations on ultimate reserves from the beginning of production, as is done with oil, since great quantities of gas were wasted and unaccounted for in the early days; hence, total gas produced to date cannot be reliably estimated. So we look to the future.

Based on the estimate of 250 billion barrels of minimum ultimate oil recovery and deducting 86 billion discovered to date, there would remain 164 billion barrels to be found in the future. At six Mcf/bbl. this would indicate future gas discoveries of 984 trillion cubic feet. Adding presently proved reserves of 238 trillion indicates a total future gas supply of the order of 1,200 trillion cubic feet, which we propose as a reasonable minimum estimate based upon present evidence.

In contemplating such huge reserves and where they can be found, one should review the past production of the oldest natural gas producing province—the Appalachian fields of Pennsylvania, New York, Ohio, Kentucky and West Virginia. Oil and gas production began in Pennsylvania in 1859. By 1917 gas production in the Appalachian Province reached the all-time peak of 522 billion cubic feet per year. So strong has been the sustaining power of new discoveries, extensions and deeper drilling that in 1956—39 years later—the Appalachian Gas Province

(Continued on page 56)

Enters gas cooking contest

Broadway star Nelle Adams makes Hollywood debut in the new Metro-Goldwyn-Mayer film entitled "This Could Be the Night." Big scene in the film is a cooking contest using gas ovens

Marketing pitfalls

(Continued from page 13)

when it's not experience at all and only lazy habitual or traditional thinking masquerading as experience. That occurs in all businesses and it is dangerous.

Many years ago two companies dominated the dry cereal business. Kellogg and what is now the Post Division of General Foods. They both knew all about the business. They knew that dry cereal was eaten only in warm months so they advertised them only from spring to fall. During the winter, people ate hot cereals and in spring each company had big sampling campaigns to reacquaint the public with dry cereals.

General Mills decided to go into the dry cereal business. They didn't know you couldn't sell dry cereal in the winter. So—they kept on selling the "Breakfast of Champions" all winter while the Kellogg and Post people watched with amusement. By spring, the amusement had changed to amazement and General Mills was firmly established in the cereal business. Unfortunately, that doesn't happen often enough, but it illustrates that you cannot afford to freeze your marketing concepts ever.

Too often in marketing we say this worked last year, let's do it again. We think it is safer or better to stay with what we have tried before. I don't think it's safer or better—I think it's dangerous. We need to forget a lot of what we know and look for new ways—even for ways that are in direct conflict with experience.

I think it is safe to say that there have been more changes in the process of marketing since 1946 than in all the years since the Industrial Revolution. Look at some of them:

Shopping centers.

Discount houses selling major brands.

Installment buying of almost everything.

The move to the suburbs with all the new appetites this creates.

The do-it-yourself movement.

The disappearance of household help and the impact on household labor-saving device markets.

Increased interest in participation in sports.

A sharp increase in cultural interests.

High-fidelity music—paintings—books.

The reinstitution of the home as the center of the social activity of the family —thanks to television and more attractive livable homes.

Travel for everybody.

Taken all together, they mean that we are selling today in an entirely different social atmosphere than we had a few years ago. More than social changes, the McGraw-Hill Publishing Company recently estimated that 10 per cent of the products to be sold in 1960 were unknown in 1956.

What makes anyone think the sales techniques of a few years ago will meet today's challenge? It's a new world and it takes new ideas. There are new kings arising in Egypt and they know Joseph not—unless Joseph's people keep up.

I'd like to quote a statement from a recent *Sales Management* magazine. It was made by Noel Eldred, sales manager for Hewlett-Packard Company, makers of measuring instruments.

His company is outpacing its competitors with a growth since World War II of twice that of the industry. It began in a garage in 1939 and now it employs 900 persons, has sales of $15 million annually and is the largest company in the field.

Mr. Eldred says, "Whether it's a sales problem, promotion of a new method of measuring or instrumentation needed in a certain field, we start without preconception, we do not reject tradition when it exists, but we see no reason to be bound by it."

I said earlier that I thought that the gas utility industry was particularly vulnerable to the dangers of marketing experience or habits that pass for marketing experience. The utility industry tends to grow its own executives and has relatively low turnover of personnel. The policies which produce this in business are admirable in terms of their human and social values but stability of personnel can result in inbreeding of ideas and emphasis on traditional methods unless great emphasis is put on experimentation with new ideas. This can be a catastrophe in the marketing area when the industry is facing dynamic market shifts.

If I were a gas utility president facing today's problems, I believe I would take a long look at my marketing organization and ask myself if it is part of my problem or part of the solution to my problem, and I believe I'd draw my conclusions based upon the numbers of new and fresh marketing ideas coming from that activity.

If I were a sales executive of a gas utility facing today's shifting market, I think I would forget for a while what I thought I knew about my products, markets, customers and experience and seriously go back to the basic marketing questions on which all good marketing programs are based.

Rudyard Kipling once wrote a bit of doggerel which states these questions very well. He wrote: "I had six honest serving men who taught me all I know. Their names were: What, when and where, and who, why and how." I would ask these six questions about my products and my markets and answer them honestly and in writing. It sounds juvenile but I assure you it is not, and I raise these two questions which you can answer for yourself:

1. Do you really know the present location, characteristics, habits and attitudes of the people you want to sell? Are decisions based on present facts about these questions or on cliches based on old experience?

2. Can you clearly define the buying motives and appeals of your customers? Have you had a recent good check or do you just think you know?

When you have determined that you and your people really know who your customer is, where to find him, when to go after him, how to do it, why he buys and what he will buy, you have taken the first step in guarding against too much of the wrong kind of market experience.

When you have good up-to-date answers to the basic problems, then you are ready, it seems to me, for the next steps in bringing market experience in focus with today's problems by asking three more questions:

First: Have your marketing objectives been clearly defined by the management and does everyone understand them? Objectives and the policies they create need modernizing too.

Secondly: Having clearly defined and understood policies, are all of your marketing activities and programs consistent with them? Many times we seem to defeat ourselves by continuing programs out of habit and tradition which are not consistent with our objectives—particularly if the objectives have been brought up to date.

Thirdly: Are your marketing programs of advertising, sales and promotion coordinated? Sometimes in changing times the left hand gets out of touch

with the right. I think the present aggressive program of the Milwaukee Gas Light Company is a beautifully coordinated program touching all the bases.

Let me give an example of the kind of questions each gas utility executive who is responsible for marketing results needs to ask about his program.

Assuming that the objective of a gas utility company broadly stated is to build gas load and the sale of appliances is only a means to that end, doesn't the gas utility have a series of questions concerning dealers which need answering before a good load building program can be established which meets present conditions? A. G. A. says that dealers sell 90 per cent of all appliances so these questions occur to me:

1. How many gas appliance dealers are there in your area? Is this enough for the number of potential customers?
2. How many competitive dealers are there? Are they increasing?
3. Have you covered adequately or do manufacturers of gas appliances cover other types of retail operations such as department stores, chain stores, furniture stores, super-markets, discount houses?
4. How many dealer contact men do you have and how many outlets does each man have assigned to him? Can he cover them well?
5. Do you issue regular dealer bulletins and sales helps?
6. Do you have dealer training meetings regularly? Are you getting good attendance? If not—why not?
7. Are you working with manufacturers to help their dealer programs?
8. Does your sales compensation plan support or interfere with a modern dealer program?

Are these dealer programs important? A. G. A.'s action demonstration program of several years ago proved that. In one utility's area there were only four dealers displaying gas appliances until they started their test promotion. In two years there were 135 dealers of whom 55 displayed two or more types.

Another example of the importance of dealer programs is the success story of the Fedders-Quigan Company as reported in *Sales Management*. They are number one in the room air-conditioner market followed by six full line giants in the electric appliance business. Their program is heavily concentrated on the dealer with promotion trips paramount. In 1952 they flew 252 dealers to Nassau and they have had such a trip each year since with the participating dealers increasing amazingly. This fall they expect to take 7,000 dealers to Nassau for a week-end.

Fedders prices are 10 per cent above the average of their major full line competitors, but they have a coordinated program concentrating on the dealer and they are number one.

You can go through similar questions evaluating the modernity of your program for architects and builders in serving the new home market. This market will consist of at least one million new homes each year for the next twenty or thirty years. Not only that but, as Mr. Sietz said, these new homes set the pattern for modernization of older homes.

We are serving an amazingly complex market and it takes complex programs to succeed. Soundly conceived and executed with something for everyone who can help get the job done. We can never forget that dealer, builder, architect, consumer, all have different motivations and our program must appeal to all.

I've attended many gas industry meetings and heard constant references to the support given the electric utilities by the large manufacturers of electrical appliances and equipment. In a recent *Management Audit* of Equitable Gas by the American Institute of Management they had this to say:

"The principal sales competition does not come from the other two gas companies in Equitable's area. Rather, it comes to all three, as it does to gas utilities everywhere, from the sales effort of the large electric appliance manufacturers. The massive advertising and promotional campaigns which they conduct for their appliances create business for the electric utilities. No gas appliance manufacturer is capable of conducting any large-scale campaign so that the burden of promoting gas appliance sales and in turn the sale of natural gas falls almost entirely on the gas utilities."

I would like to ask a question. Have you ever visited an electric utility sales floor and seen the support those big companies get? Which came first, the chicken or the egg? Whether by design or accident, I can't say, but the gas utilities have seen fit to support, over the nation, literally hundreds of manufacturers of gas appliances. The only question asked seems to be, can you manufacture according to our minimum standards? How about setting some standards for research and marketing programs before supporting a manufacturer?

I wonder if that policy of support for all qualified products doesn't need modernizing in view of present market conditions. The result has been to sustain many small units who can never make enough profit under the competitive conditions caused by regional manufacturers, existing in a local market, within the protection of freight rates, to either have adequate research or marketing programs in support of the utilities. Concentration behind the products of relatively few, profitable, well managed national companies might better meet today's problem.

Today's markets have forced quite a challenge upon us. New kings are indeed arising. Sometimes we may wonder if the game is worth the strain of meeting the ever changing conditions we encounter.

If A. G. A. is right, it's quite a game. They have set targets for the industry in the 1955-65 decade of 36 million ranges; 33 million water heaters; almost 9 million central heating units; 8 million floor and wall furnaces; 25 million space heaters; 2 million incinerators and 5.5 million dryers.

There is real excitement and opportunity in those conservative figures and they could be much higher. The gas will be there. By the end of 1965 the present 525,000 miles of gas transmission lines will be increased to 736,000.

What are you going to do with those Btu? The answer lies in an old Chinese parable about a certain wise old philosopher who lived in the Village of Nanchang and who repeatedly could answer any question correctly. Two young men of the village anxious to show him up conceived of a plan.

One would go to the philosopher with a live bird concealed in his two cupped hands and ask if the bird were dead or alive. If the old man said "dead," he would open his hands and let it fly away. If the old one said "alive," he would squeeze it to death. Either way, the philosopher would be wrong. The wise old man considered the question and finally said, "The answer my son, lies in your own hands."

And, so does the answer to the question of whether the gas industry can meet the challenge of today's dynamic market lie in your hands and in your imaginative minds.

Nominations (Continued from page 4)

For vice-chairman—MARVIN CHANDLER, president, Northern Illinois Gas Co., Aurora, Ill.

INDUSTRIAL AND COMMERCIAL SECTION

For chairman—ROY E. WRIGHT, director of gas sales, NEGEA Service Corp., Cambridge, Mass.

For vice-chairman—F. T. BROOKS, sales manager, industrial sales department, Philadelphia Electric Co., Philadelphia, Pa.

OPERATING SECTION

For chairman—V. F. BITTNER, assistant chief technical engineer, The Peoples Gas Light and Coke Co., Chicago, Ill.

For vice-chairman—H. C. JONES, gas engineer, New England Electric System, gas division, Malden, Mass.

For second vice-chairman—J. T. INNIS, vice-president in charge of operations, Northern Natural Gas Co., Omaha, Neb.

RESIDENTIAL SECTION

For chairman—A. G. BUR, vice-president in charge of sales, Wisconsin Public Service Corp., Green Bay, Wis.

For vice-chairman—THOMAS H. EVANS, vice-president of sales, Equitable Gas Co., Pittsburgh, Pa.

Convention plans

(Continued from page 5)

facturing Co.; John W. Holzman, vice-president in charge of sales, Magic Chef, Inc.; J. N. Shrader, manager, division coordination, Southern California Gas Co.; William H. Otto, director, public relations and advertising, Laclede Gas Co.; Lester E. Reynolds, vice-president and treasurer, The Connecticut Light & Power Co.; and Richard F. Mulligan, entertainment secretary, American Gas Association.

Entertainment plans include the President's Reception and Dance Monday at 8 p.m. in the Gold Room, Sheraton-Jefferson Hotel; a ladies' luncheon and style show Tuesday at 1 p.m. in the Sheraton-Jefferson's Gold Room, and a fast-moving, entertaining variety show Tuesday at 8:30 p.m. in either the Chase-Park Plaza or the Sheraton-Jefferson Gold Room.

The Accounting Section will hold sessions at 2 p.m. on Oct. 7 and 8 in Kiel Auditorium's Assembly Hall No. 1. Austin W. Merchant, superintendent, customer accounting, Michigan Consolidated Gas Company, and coordinator of the Customer Activities Group, will preside Monday. James F. Daly, assistant comptroller, Long Island Light Company, and assistant treasurer, American Gas Association, will preside Tuesday. He is coordinator of the General Activities Group.

Mr. Merchant will open Monday's session with a paper on *Customer Accounting*. Claude F. Wahli, chairman, Customer Accounting Committee, and customers' accountant, Knoxville (Tennessee) Utilities Board, will speak on *Keys to Customer Premises*.

Also slated for the Monday meeting will be a talk on Accounting Employee Relations by Erwin K. Taylor, President, Personnel Research and Development Corp., Cleveland, Ohio; a paper on electronics by J. H. Purdy, Baltimore Gas and Electric Co.; and a speech entitled *Dividends Out of Capital* by Clifford H. Domke of the firm, McKone, Badgley, Domke & Kline, Jackson, Michigan.

Also at the Monday session, President Zachry will present the Order of Accounting Merit Awards.

Tuesday's Accounting session will be opened by Mr. Daly who will preside. The afternoon's schedule will include the following: *The Chairman's Report* by W. D. Sweetman, The Peoples Gas Light and Coke Co., Chicago; a report of the Nominating Committee by E. R. Eberle, Public Service Electric and Gas Co., Newark, New Jersey; election of Accounting Section officers; a talk on *Cost Price Regulation in the Field of Natural Gas Production* by a speaker to be announced; a talk on credit and collection (title and speaker to be announced); and a talk on the attitude of the educator by Prof. Robert T. Livingston of Columbia University, New York, N. Y.

The General Management Section will hold its annual luncheon meeting in the ballroom of the Hotel Coronado at 1 p.m. Tuesday, Oct. 8. The session, presided over by Section Chairman Leslie A. Brandt, vice-president, The Peoples Gas Light and Coke Company, Chicago, will hear a prominent speaker on a topic of current interest.

A new award, the A. G. A. Public Relations Achievement Award, will be presented for the first time at the meeting.

The industry's highest recognition for accident prevention—the A. G. A. Safety Achievement Awards—will also be presented during the General Management Section session. These awards go to those companies, who in 1956, achieved the lowest accident frequency rate among companies of the same type and size.

The election of new Section officers and the 1958 Nominating Committee also will be conducted.

Following a precedent of several years, the Industrial and Commercial Gas Section program will start with a joint luncheon with the Residential Gas Section in the Ivory Room of the Sheraton-Jefferson Hotel at 12:30 p.m., Tuesday, Oct. 8. Since members of both Sections are primarily interested in sales, a dynamic speaker will be chosen to bring this theme to the delegates.

Immediately following the luncheon, and in the same room, the Industrial and Commercial Gas Section, headed by Chairman J. Robert Delaney, The Cincinnati Gas & Electric Company, will hold its annual meeting. Subjects of timely interest to members are being selected and speakers, yet to be announced, will present the highlights of gas industry thinking in the industrial and commerical utilization fields.

The report of the chairman of the Nominating Committee, and election of Section officers also will take place at the afternoon session.

The Residential Committee, following the joint luncheon, will gather at 2 p.m. in Assembly Hall No. 3, Kiel Auditorium for its annual meeting. The program will include a dramatic and colorful review of the 1958 A. G. A. Sales Promotional and Advertising program as listed in the 1958 Sales and Promotional Plan Book. This part of the program will be handled by W. D. Williams, Residential Section chairman, and vice-president in charge of sales, New Jersey Natural Gas Company, Asbury Park, New Jersey.

The tentative program also includes a dramatic "pitch" on selling automatic gas ranges, with particular emphasis on the automatic top burner heat control, by a representative of one of the large gas range manufacturers.

The residential meeting will be closed with a talk on the subject of selling and serving. A nationally-known speaker will be chosen for this assignment.

The Operating Section will hold two sessions in Assembly Hall No. 3, Kiel Auditorium, at 2 p.m. on Monday and Tuesday.

Grove Lawrence, Southern California Gas Company, and chairman, Operating Section, will open Monday's session with a report on Section activities. Highlight of the opening session will be the presentation of awards by Mr. Zachry. Three awards, the Beal Medal, the Operating Section Award of Merit, and the Distribution Achievement Award will be given.

Also on Monday's program will be a paper on *Securing, Training and Keeping Technical Personnel* by Mark V. Burlingame, vice-president in charge of operations, Natural Gas Pipeline Company of America, Chicago; and papers on *Military Petroleum Advisory Board and the American Gas Industry* by a speaker to be selected from the MPAB, and *The Advantages and Economics of Automatic Data Processing Equipment as Applied to Gas Control* by a speaker yet to be named.

Tuesday's session will open with a report by the Nominating Committee and the election of Operating Section officers.

J. V. Keller, of the firm Dow, Lohnes & Albertson, Washington, D. C., and a special representative of the A. G. A. Communications Committee and other gas and oil industry groups, will deliver an address entitled *Communications—A Review of FCC Action and Its Possible Effects Upon the Gas Industry.* Papers by speakers yet to be named will be given on the subjects of *A National Field Observation Program for Customers Service Departments* and *Mutual Aid in Emergencies.*

The Home Service Breakfast will be held in the Gold Room of the Sheraton-Jefferson Hotel on Tuesday. Marjorie Chandler, home service director, The Consumers' Gas Company of Toronto, will preside as chairman of the A. G. A. Home Service Committee. In the afternoon, the Home Service Roundtable will meet in the Crystal Room at the Sheraton-Jefferson.

All reservations must be received prior to Sept. 7. A registration fee of $20.00 will be charged for delegates, with no charge for ladies accompanying delegates. Reservations should be made with the Hotels Convention Reservation Bureau, A. G. A., Room 405-911 Locust St., St. Louis 1, Missouri.

Facts and Figures

(Continued from page 18)

pared with 92,000 homes started during April and 113,700 started during May 1956. Federal housing officials now figure new starts this year will total about 1 million units.

Automatic gas water heater shipments during May totaled 238,600 units, down 2.3 per cent from May 1956. For the first four months of this year a total of 887,900 units were shipped; this was down 11.8 per cent from the 1,006,900 units shipped during same cumulative period of last year.

Gas range shipments including built-ins during May aggregated 157,200 units, down 12.5 per cent from a year ago. There were 657,900 ranges shipped during the first four months of 1957, 9.2 per cent lower than the shipments made in the first four months of 1956.

Shipments of 67,800 gas-fired central heating units during May 1957 were down 17.2 per cent from the 81,900 units shipped during May 1956. During this same period oil-fired installations totaled 37,103, down 15.5 per cent.

Automatic gas clothes dryers shipped during the month of April totaled 15,100 and remained unchanged from the number shipped during April 1956. On the other hand, electric dryer shipments of 27,800 units during April were down 44.2 per cent from a year ago. During the first four months of this year gas dryer shipments totaled 116,700 units, down 10.0 per cent from the comparable cumulative period of last year, while electric dryer shipments of 269,000 units during this same cumulative period were down 25.9 per cent from a year ago. The ratio of gas dryer shipments to electric dryer shipments during April was the most favorable ratio thus far, 1 gas to 1.8 electric.

Gas appliance data relate to manufacturers' shipments by the entire industry compiled by the Gas Appliance Manufacturers Association. Industry-wide electric appliance statistics are based on data compiled by the National Electrical Manufacturers Association and are reprinted by GAMA in its releases. Data relating to oil-fired burner installations are compiled by *Fuel Oil and Oil Heat.* Data on both gas and electric dryer shipments are released regularly by the American Home Laundry Manufacturers Association.

South Atlantic receives A. G. A. safety award

Presenting the A. G. A. Accident Prevention Award to South Atlantic Gas President Hansell Hillyer (right) are Frank Barragan Jr. and Arthur P. Gnann Jr. (left) of the Savannah division. The division holds monthly safety meetings, and reminds its drivers about safety by the sign on the back of its service vehicles: "Drive careful, pod'ner! This town is full of natural gas customers!"

Industry news

St. Louis is site of safety conference

THE NINTH ANNUAL Accident Prevention Conference will be held at the Sheraton-Jefferson Hotel in St. Louis, Mo., on Sept. 17-18. E. C. Baumann of Public Service Electric & Gas Company, chairman of the A. G. A. Accident Prevention Committee, will be the presiding officer. Howard T. Jayne of Philadelphia Gas Works, chairman of the Program Subcommittee, has assembled a program that seeks to appeal to every segment of the gas industry.

A special feature of the conference is the Materials Exchange Display, where various methods and materials of communication with employees will be shown. Materials for this display have been contributed by utilities all over the country.

H. Reid Derrick, president of Laclede Gas Company, will extend the welcome to conference delegates. His company will act as host for the conference.

First speaker on the first day will be Stanford Downey of Southern Natural Gas Co., chairman of the Safety Committee of the Independent Natural Gas Association of America. His topic will be "Independents Think of Safety, Too."

Next, Robert W. Otto, board chairman of Laclede and second vice-president of A. G. A., will address the delegates on "Our Future Is Safe." He will present Accident Prevention Certificates to member companies who have reduced their accident frequency rate by 25 per cent from 1955. Awards will also be presented to the winners for 1956 and 1957 of the Gas Industry Fleet Safety Contest.

The afternoon session will start with a talk and demonstration by G. M. Kintz and H. F. Browne of the Bureau of Mines. Included will be a demonstration of flame propagation, and the showing of slides to illustrate the results of investigations and analyses of a number of the more recent incidents involving gas.

The day will be concluded by a panel on "Inspection Procedures." William E. Maguire, Peoples Gas Light & Coke Company, will speak on "How We Present Our Findings"; Peter Barry, Rochester Gas and Electric Corporation, on "Management Helps in Our Plant"; and Clint Pendleton, New England Power Service Company, on "We Follow Up."

The second day will start with a safety workshop, with Charles Williams, The Gas Service Company, presiding. Conference delegates will organize into seven separate groups, and each group will discuss one of the major types of gas industry accidents.

Moderators and their discussion topics are: Charles Cummings, Hope Natural Gas Company, "How to Sell Employees on Safety"; John O'Toole, Utilities Mutual Insurance Company, "Lifting Accidents—Control and Prevention" and "Common Hand Tool Accidents"; Stanley Owens, Transcontinental Gas

E. C. Baumann

Howard T. Jayne

Pipe Line Corporation, "Facts on Falls" and "How We Get Employees to Use First Aid"; William J. Easton, Cincinnati Gas & Electric Company, "Safe Use of Excavating Equipment"; Vincent Howell Sr., Long Island Lighting Company, "Backing—A Main Source of Motor Vehicle Accidents"; E. E. Taylor, Southern California Gas Company, "Fire Hazard Control"; and Marvin Travis, Northern Natural Gas Company, "Off the Job Accidents—Our Concern."

The final speaker will be W. B. Haas, Northern Natural Gas Company, on the topic "Efficiency or Accidents."

The conference will be concluded by a take-off on the TV panel show "I've Got a Secret." Safety problems and solutions will be under discussion by contestants and by the panel, consisting of: E. S. Beaumont, The Peoples Gas Light and Coke Company, moderator; R. L. Conway Jr., United Gas Corporation; G. J. McKinnon, Michigan Consolidated Gas Company; Charles O'Reilly, Boston Gas Company; and two other men—one an authority on utilization, the other on pipeline operations.

Program plans set for ASME-AICE heat transfer conference

PROGRAM PLANS have been completed for the first National Conference on Heat Transfer, to be held Aug. 12-15 at Pennsylvania State University, University Park, Pennsylvania. This conference will be sponsored jointly by the heat transfer division of The American Society of Mechanical Engineers and the American Institute of Chemical Engineers. The program includes 35 technical papers, and inspection trips to the "swimming pool" nuclear reactor and the Naval Research Ordnance Laboratory at the University. There will also be a series of industrial exhibits. Guest of honor at a banquet on Aug. 14 will be Professor W. H. McAdams, for 43 years a member of the faculty of Massachusetts Institute of Technology. Professor McAdams is known for his pioneering work in heat transfer, and his textbook in the field has been an authoritative work for over 30 years.

Texas Eastern authorized to remove line segment from gas service

TEXAS EASTERN Transmission Corporation, Shreveport, Louisiana, was authorized in June by the Federal Power Commission to remove a 1,168 mile segment of the Little Big Inch pipeline from natural gas service. The company will immediately reconvert the section to service as a common carrier of petroleum products, according to Orville S. Carpenter, president.

The 1,168 mile section of the Little Big Inch scheduled for reconversion extends from Baytown, near Houston, Texas, to Moundsville, West Virginia, and will connect with a 14-inch pipeline which the company will build from Seymour, Indiana, to Chicago. Completion of this project will establish the first major petroleum products common carrier pipeline link between the Gulf Coast and Mid-Continent refining areas and the fast growing Midwestern market area.

The facility will make available new supplies of the full range of clean petroleum products including liquefied petroleum gases to the Midwestern markets from the Gulf Coast and Mid-Continent refining areas, Mr. Carpenter said. Work on the reconversion project began immediately and is expected to be completed in time for the line to begin operation in September.

The ruling by the Federal Power Commission also authorized Texas Eastern to construct substitute natural gas facilities sufficient to handle the gas now being carried through the Little Big Inch. The company plans to spend approximately $35 million to reconvert and extend the Little Big Inch for the transportation of petroleum products, and approximately $61 million to construct substitute facilities to replace the gas capacity of the Little Big Inch line.

The substitute gas facilities will involve construction of 453 miles of 30-inch pipeline loops and addition of 42,300 compressor horsepower primarily along the company's 30-inch natural gas pipeline between Beaumont, Texas, and Uniontown, Pennsylvania. In addition, four new compressor stations will be constructed at Gillis and St. Francisville, Louisiana; Clinton, Mississippi; and Booth, Texas.

Compressor horsepower at Vidor, Texas, and Holbrook, Pennsylvania, will be increased, Mr. Carpenter added.

When the reconversion program is complete, Texas Eastern will be operating approximately 1,700 miles of pipeline and 61,500 pump horsepower in petroleum products service, and some 5,800 miles of pipe and 471,660 compressor horsepower in natural gas service.

Form committee to stimulate promotion of gas air conditioning

W. W. Selzer

FORMATION of a 12-man Air Conditioning Promotion Committee to stimulate the promotion and sale of residential, commercial and industrial gas air conditioning equipment has been announced by the American Gas Association as the industry's latest major step to accelerate its development and marketing program in this fast-growing field.

W. W. Selzer, director of business promotion for the Columbia Gas System Service Corporation, will serve as chairman of the new special task force group operating under the General Promotion Planning Committee of the A. G. A. PAR Plan.

The committee, which held its first official meeting in New York on July 12, will coordinate the stepped-up efforts of industry research committees, gas air conditioning equipment manufacturers, and the sales and promotion organizations of utility companies.

Members of the new committee represent practically every region in the country, reflecting the nationwide interest by utilities in gas air conditioning. Committee members in addition to Mr. Selzer are:

W. D. Williams, vice-president of sales, New Jersey Natural Gas Co., Asbury Park, N. J., and chairman of the A. G. A. Residential Gas Section; J. Robert Delaney, manager of gas sales, Cincinnati Gas and Electric Co., and chairman of the A. G. A. Industrial and Commercial Gas Section.

Also, B. C. Adams Jr., vice-president and general manager, The Gas Service Co., Kansas City, Mo.; Harold F. Carr, manager, residential sales promotion, Baltimore (Md.) Gas & Electric Co.; H. William Doering, heating and air conditioning manager, Springfield (Mass.) Gas Light Co.; E. L. Henderson, vice-president, United Gas Corp., Shreveport, La.; David J. Kerr, director of business development, Southern Union Gas Co., Dallas, Texas; John S. McElwain, sales manager, The East Ohio Gas Co., Cleveland; Frank N. Seitz, vice-president of sales, Southern Counties Gas Co., Los Angeles, Calif.; G. J. Tankersley, executive vice-president, Gas Light Company of Columbus (Ga.), and chairman of the Southern Gas Association Air Conditioning Committee; and R. J. Vandagriff, vice-president sales, Laclede Gas Co., St. Louis, Mo.

CL&P matches employees' contributions to private colleges

THE CONNECTICUT Light and Power Company has announced the establishment of an Aid to Higher Education Program under which the utility will match a contribution, up to $500, made by any employee to any privately financed college or university located in the United States or its possessions. In addition to duplicating employee contributions to colleges and universities, the CL&P aid program also makes eligible contributions to college alumni funds, foundations or associations.

Bing Crosby to star in gas industry "White Christmas" promotion

a PAR activity

THE American Gas Association and Bing Crosby announce the signing of a contract which will launch the largest merchandising campaign in the history of the gas industry.

Bing Crosby, "Mr. White Christmas" himself, will spark the national campaign which is scheduled to roll into high gear during November and December, the height of seasonal buying. Bing will urge consumers to "Make it a White Christmas . . . give her an automatic gas appliance."

The national campaign will be supported at the local level by close to 400 gas utility companies, serving more than 21 million American families. Also participating will be gas appliance manufacturers and dealers from coast to coast.

S. F. Wikstrom, A. G. A. director of promotion and advertising, announced that Bing Crosby will deliver four TV commercials featuring automatic gas appliances on the award-winning dramatic series, "Playhouse 90," viewed by an estimated 13,000,000 families each week. The Bing Crosby TV commercials will also be made available for local use by gas companies participating in the gas industry's national TV program.

In addition to his TV appearances, Bing will be featured in full-color, full-page ads in leading national magazines. These will be further supplemented by extensive advertising in newspapers, gas trade journals and general retailing and dealer publications.

C. R. Bowen, A. G. A. promotion manager, will coordinate the campaign and make available an array of promotional aids.

These will include: giant window and floor displays, outdoor posters, point-of-sale displays, gift certificates, premiums, contest material, 16 mm. films for dealers, newspaper ad mats, movie trailers, bus cards, truck cards, counter displays, long-playing records, and publicity material.

This colorful display for show rooms is available from the A. G. A. Promotion Bureau. Included are the stand-up figure with three-dimensional snowball, the large (42" x 32") background piece, and six copies of the stand-up figure shown at right. The cost is $4.10 a set, f.o.b. Chicago

Ready to sign a contract which will launch the largest merchandising program in gas industry history is Bing Crosby, shown with S. F. Wikstrom, A. G. A. director of promotion and advertising. Bing will urge consumers to "Make it a White Christmas . . . give her an automatic gas appliance"

A.G.A. announces new publications issued during June 1957

ACCOUNTING

The A. G. A. Accounting Section is offering, free of charge, papers presented at the 1957 National Conference of Electric and Gas Utility Accountants. Titles now in stock include the following.

- **Machine Methods Used to Determine New Account Balances and to Select Accounts for Collection Treatment** by R. G. Maas.
- **The Internal Auditor—Friend or Foe** by A. J. Gregory.
- **Facts and Friction** (panel discussion by Customer Activities Group).
- **Recent Court Decisions on Taxes** by W. S. Alt.
- **Harvard Research Project Report** by Howard H. Aiken.

NEW FREEDOM

- **Your Guide to Kitchen and Laundry Planning** (for home service and sales groups, and for distribution to consumers). Sponsored by and available from A. G. A. New Freedom Bureau. The cost is 25 cents each for single copies, and 15 cents each for copies ordered in quantities of 100 or more.

OPERATING

- **Operating Section Proceedings** (for operating personnel, utility libraries). Sponsored by Operating Section, and available from A. G. A. Order Department at $10 a copy.

RESEARCH

- **Accuracy of the Cutler-Hammer Recording Gas Calorimeter When Used with Gases of High Heating Value** (for gas utilities). Sponsored by Gas Operations Research Committee, and available at $1 a copy from A. G. A. Headquarters.

SAFETY

- **Report of Employee Fatalities in the Gas Utility and Pipeline Industry During 1956** (for gas company safety and personnel directors). Sponsored by Accident Prevention Committee and available from A. G. A. Accident Prevention Bureau. Copies are free of charge to A. G. A. members, and 10 cents each for non-members.
- **How Injuries to Gas Men Might Be Avoided** (for safety and operating personnel). Sponsored by Accident Prevention Committee and available from A. G. A. Single copies are free.
- **Safety Siftings** (for safety and operating personnel, and utility editors). Sponsored by Accident Prevention Committee and available from A. G. A. Single copies are free.

STATISTICAL

- **Quarterly Report of Gas Industry Operations, First Quarter 1957** (for gas companies, financial houses). Sponsored by and available from the A. G. A. Bureau of Statistics; free.
- **Monthly Bulletin of Utility Gas Sales, April 1957** (for gas companies, financial houses). Sponsored by and available from the A. G. A. Bureau of Statistics; free.

Utah PR Workshop reveals progress in gas industry unity

GAS INDUSTRY UNITY is the "forward look in public relations," 65 utility, pipeline and LP-Gas representatives agreed during a two-day PR Workshop in Salt Lake City, May 28-29. The meeting was jointly sponsored by the Pacific Coast Gas Association and the American Gas Association.

Discussion leaders, headed by Chairman James D. MacFarland, director of public relations, Southern Counties Gas Co., urged the industry to unite on two big jobs—making gas available everywhere, and presenting the facts about gas everywhere.

Slow but steady progress in gas unity was revealed during a panel discussion headed by moderator W. R. Sidenfaden, Suburban Gas Service, Upland, Calif.; Jack H. Mikula, Milwaukee Gas Light Co., chairman of the Gas Unity Committee; B. Marshall Willis, El Paso Natural Gas Co.; Howard D. White, Liquefied Petroleum Gas Association; and William J. Bailey, Day & Night Manufacturing Co., Monrovia, California. Mr. Sidenfaden pointed out that one out of every five gas customers uses LP-Gas.

J. Wilson Gaw, Washington Natural Gas Co., Seattle, moderated a panel on "Investor vs. Municipal Ownership of Gas," along with James J. Diesing, Kansas-Nebraska Natural Gas Co., and Frank C. Sullivan, Southern California Gas Company.

It is not enough to do a good job, this group concluded. In addition, the gas company must at every opportunity identify itself with private enterprise, otherwise promoters looking for a quick profit will take over.

Panel members saw a tremendous need for gas companies to do a better telling job in their own communities and to show the public what municipal ownership would cost them. The local manager is the key man in developing good community relations, they agreed.

Walter C. Prill, Southern Counties Gas Co. of California, moderated a discussion on public information activities to promote acceptance of gas as a safe fuel. This was highlighted by Southern Counties' demonstration, "Properties of Natural Gas," which has been presented to fire and police departments throughout the country.

J. Wilson Gaw was elected chairman of the next Western Region PR Workshop, and B. Marshall Willis was elected vice-chairman.

Comparing notes during A. G. A.-PCGA PR Workshop are (l. to r.): S. E. Cowan; J. D. MacFarland, chairman; and J. Wilson Gaw, chairman-elect

The gas industry unity panel at the Salt Lake City meeting included (l. to r.): B. Marshall Willis, El Paso Natural Gas; Howard D. White, LPGA; William J. Bailey, Day & Night Manufacturing Co.; W. R. Sidenfaden, Suburban Gas Service, moderator; and Jack H. Mikula, Milwaukee Gas Light

Dealers join South Jersey Gas in spring range kick-off event

A MUSICAL extravaganza entitled "Spring Enchantment" drew 240 dealers and dealer salesmen to the South Jersey Gas Company spring range kick-off event.

The event was the culmination of plans formulated early last year after the utility undertook a complete market survey of its service area. Interviews with all the 200 appliance dealers in the area had disclosed a need for increased dealer promotion effort.

As a result, a new five-star dealer plan was initiated by South Jersey, and 80 dealers have already agreed to participate. Special features for dealers include 100 per cent non-recourse financing during campaigns, assistance on installation problems, cooperative advertising, bonuses for reporting sales, and a promise of year-round promotions with full utility support including dealer listing advertising, promotional material, and sales bonuses.

Five-star appliance dealers agree to: buy and stock a matchless gas range with automatic top burner heat control; buy or stock on consignment from the utility an automatic gas water heater and automatic gas dryer; display and promote gas appliances prominently all year around.

"Spring Enchantment" sets the theme for the spring range kick-off event held by South Jersey Gas Company and well attended by 240 dealers and dealer salesmen from the area around Atlantic City

The actual kick-off event held at Atlantic City's Traymore Hotel started off with a social hour. Then came the "Spring Enchantment" extravaganza, held beside the indoor pool, with ranges in the background. There, speeches outlining the campaign, potential profits, sales techniques, and dealer incentives were interspersed with professional songs, dances and aquacades.

Permaglas water heater displayed at trade fair in Poland

A 65-GALLON deluxe A. O. Smith Permaglas water heater was one of the American consumer products to be shown for the first time behind the iron curtain. The showing, by the U.S. Department of Commerce International Affairs Division, was held at the 26th International Trade Fair in Poznan, Poland, June 9-23.

"Our basic aim at the Poznan Fair is to show our Polish friends and visitors some of the products which are available in the United States; some of the things we wear, use and consume," said H. C. McClellan, assistant secretary of Commerce for International Affairs.

The water heater was housed in the U. S. Central Exhibit that emphasized individuals and family living. A V-shaped aqua front panel, copper-tone trim and eye-high controls were expected to disguise so completely the water heater that visitors to the fair would have to have the appliance pointed out before they could recognize it.

Clothing, recreational equipment, other appliances, automobiles, trucks, and agricultural and industrial machinery were also displayed at the fair. The American pavilion, believed to be the world's largest prefabricated dome, was the center of the 30,000 square foot exhibit area. Covered with translucent plastic-coated nylon, the central dome enclosed an area of 12,000 square feet. Several other one-story structures around the dome contained the extra 18,000 square feet.

Last year 1,108 foreign firms from 36 countries displayed products at the Poznan Fair. About 1.5 million people visited the fair last year, and more were expected to attend this year.

Southern Counties displays exhibit on underground storage

FACED WITH an apparently widespread popular notion that underground natural gas storage involves pumping gas into giant caverns or voids in the earth, Southern Counties Gas Company has come up with a unique new instructional device.

Under the guidance of Walter C. Prill, the company's educational services manager, and with the aid of Jones-Bause Company of Los Angeles, Southern Counties has developed a new, portable working model of a typical underground storage field.

The model portrays a field similar to that maintained by Pacific Lighting Gas Supply Company, a Southern Counties affiliate near Montebello, California. It consists of a large plywood box on wrought iron legs, which is painted to show various levels of the underground formation.

The storage level is represented by a plastic-encased cut-out filled with large-grain white sand.

The cut-out portion is filled with blue-colored water, representing the underground salt water of the depleted oil field. To illustrate the injection cycle, carbon dioxide is introduced—under two pounds pressure—and forces the colored water down into the lower ends of the dome structure and finally out altogether.

To show the withdrawal cycle, the carbon dioxide is withdrawn and the water allowed to fill the cut-out area. A system of solenoid valves operates the workings of the model. Two tanks, one for water and one for carbon dioxide, are housed in the hollow rear portion of the main structure.

To make the injection cycle completely realistic, "built-in" compressor noises are simulated through a recording device. A shelf below the main section of the model shows a sandstone core taken from the Montebello storage field and a greatly magnified facsimile of part of such a core, to illustrate how gas storage is possible in the space between the sand grains.

The model is being displayed in Southern Counties' offices and in selected areas to accompany service club and school speaking appearances by Mr. Prill.

Walter C. Prill, educational service manager for Southern Counties Gas Company, shows his company's new underground storage exhibit

Highlights of cases before the Federal Power Commission

Bureau of Statistics, American Gas Association

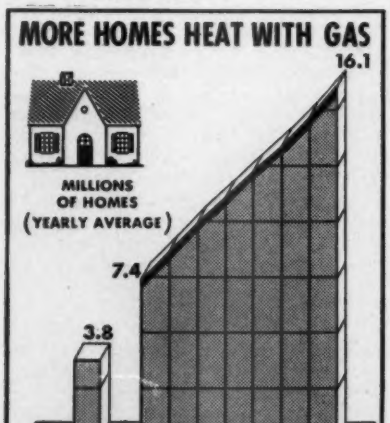
Certificate cases

● **East Tennessee Natural Gas Co.:** The company's application to construct and operate a 3,300 horsepower compressor station near Greenbrier, Tenn., has been accepted for filing by the FPC. The new station, to be built at a cost of $995,000, will enable East Tennessee Natural Gas to avoid an increase in cost of purchased gas due to a lowering of system load factor, and will insure adequate peak service.

● **El Paso Natural Gas Co.:** In an application before the FPC, El Paso Natural Gas requests authorization to construct and operate 125 miles of 30-inch loop line, 20,000 additional compressor horsepower, and other appurtenant facilities. Over-all cost of the project is estimated at $55.5 million. It will permit sale of up to 100 million cubic feet of gas daily to Southern California Edison for use as boiler fuel. Deliveries will be made at Topock and/or Ehrenberg on the Arizona-California boundary and transported to California Edison over the facilities of Southern California Gas Company and Southern Counties Gas Company.

● **Michigan Wisconsin Pipe Line Co.:** Temporary authority has been granted the company by FPC to construct and operate 22 miles of loop line in Illinois and Wisconsin at an estimated cost of $1.8 million. The project would be an adjunct to a main line loop now under construction and would provide a safety factor in the event of a line break.

Up 118 per cent



During the past seven years, the number of gas househeating customers rose 118 per cent, bringing the yearly average to 16.1 million homes. By the end of 1959, this figure should reach 20 million, not including homes using bottled gas or multiple dwellings with central gas heating

● **Mississippi River Fuel Corp.:** The company has withdrawn its application before the FPC requesting authority to construct and operate natural gas facilities that would have increased sales capacity 50.5 million cubic feet daily. The proposal included 125 miles of loop line in Louisiana, Arkansas, and Missouri, and 7,500 additional compressor horsepower in Arkansas and Missouri stations at an over-all cost of $11.6 million.

● **Montana-Dakota Utilities Co.:** The FPC has authorized Montana-Dakota Utilities to construct and operate natural gas facilities in Montana at an estimated cost of $1 million. These additional facilities, which include 28 miles of main line pipe and 1,740 compressor horsepower, will be used to increase deliveries from Tioga, N. D., reserves and to inject into and withdraw from its Baker storage area larger quantities of gas. In another certificate, the FPC granted the company temporary authorization to construct and operate natural gas facilities in North Dakota, Montana, and Wyoming at a cost of $1.1 million. The authorization includes 6 miles of transmission line between Mandan and Bismarck, N. D., new regulating stations for each city, and a lateral line to serve the company's new generating plant under construction near Sydney, Mont., with emergency gas service.

● **Natural Gas Storage Company of Illinois:** Temporary authorization to construct and operate natural gas storage facilities in the Cook Mills area of Coles and Douglas Counties, Ill., has been granted the company by the FPC. Cost of construction and appurtenant facilities is estimated at $3.7 million. The new storage field will be operated in conjunction with present underground reservoir near Herscher, Illinois. It will permit 25 million cubic feet of gas to be stored or withdrawn daily over a 36 consecutive day period although the combined fields will not exceed the present maximum of 430 million cubic feet of gas daily authorized for the Herscher field.

● **New York State Natural Gas Corp.:** The FPC has granted a certificate to the company for construction and operation of an underground natural gas storage pool in Steuben County, N. Y., and 45.6 miles of pipeline in Steuben County and in Potter and Tioga Counties, Pennsylvania. Total extimated cost is $11.6 million. The storage area, called the Woodhull Pool, will provide storage for a maximum volume of about 35 billion cubic feet of natural gas, of which about 21 billion cubic feet will be top storage gas. Withdrawals are expected to average 140 million cubic feet daily.

● **Ohio Fuel Gas Co.:** Ohio Fuel Gas has been temporarily authorized by the FPC to construct and operate 38 miles of loop line between the Crawford and Treat stations in Ohio at an estimated cost of $2.8 million. The Crawford-Treat line will be required to transport 430 million cubic feet daily in September 1957, as compared with present capacity of 356 million cubic feet daily. In an additional action the FPC has accepted for filing an application from Ohio Fuel Gas seeking authorization to construct and operate 53 miles of various diameter pipe of which nearly seven miles includes the replacement of smaller pipe. A new industrial interruptible customer, Basic, Inc. will be connected to the system. These facilities will be constructed at an estimated cost of $3.6 million and will be used to meet increased requirements in the eastern sections of Toledo, Gibsonville, Genoa and Woodville, Ohio.

● **Pacific Northwest Pipeline Corp.:** The company has three applications filed with FPC requesting authorization to construct and operate natural gas facilities, at an estimated cost of $2.4 million, required to add three industrial customers to the system. The proposal includes 34.5 miles of lateral line and other equipment to connect the Northwestern Portland Cement Company plant at Grotto, Wash.; a 4.5 mile lateral line to Union Carbide Nuclear plant at Slick Rock, Colo., and a 41 mile line to the Bunker Hill Company plant near Kellogg, Idaho. The cement and nuclear plants will require 1,078 million cubic feet of gas the first year on an interruptible basis, and the Bunker Hill plant will require 1,150 million cubic feet annually.

● **Permian Basin Pipeline Co.:** The FPC has granted the company temporary authority to construct and operate 83 miles of 16 inch line from its interconnection with the proposed gathering facilities of Pioneer Gathering System, Inc. to Permian Basin facilities at Spraberry. Cost of facilities, including a 3,960 horsepower compressor station, will be approximately $5.1 million. Contract with Pioneer Gathering provides the company with a new source of supply.

● **Texas Eastern Transmission Corp.:** The company and its subsidiary, Texas Eastern Penn-Jersey, have filed applications with the FPC seeking authorization for the construction and operation of additional natural gas facilities. Texas Eastern Penn-Jersey proposes to add 24,000 compressor horsepower to existing stations extending from the Oakford Storage Field in Pennsylvania to Texas Eastern's compressor station near Lambertville, New Jersey. Additions cost $4.4 million and will raise daily capacity to 505 million cubic feet. Texas Eastern Transmission will build 97 miles of loop line between Kosciusko, Miss., and Uniontown, Penn.; 40 miles of supply laterals; and a new 10,250 horsepower compressor station near Mont Belvieu, Texas. The line will add over 33,000 compressor horsepower to existing stations. These facilities are designed to increase delivery capacity by 112 million cubic feet daily to eight ex-

isting customers and approximately 84 million cubic feet per day of winter peaking gas to 15 existing customers. In a companion application before the FPC, Algonquin Gas Transmission requests authorization to purchase 5 million cubic feet of peaking gas from Texas Eastern Transmission.

● **Transcontinental Gas Pipe Line Corp.:** The FPC has authorized the company to construct and operate facilities to enable it to obtain supplies off the coast of Louisiana. Authorization includes 28.5 miles of 16 inch purchase lateral pipeline and appurtenant equipment to receive natural gas purchased from Block 45 and Block 56 Fields. Block 45 Field has 8 wells with total estimated proven reserve of 88 billion cubic feet. The proposed line, for which temporary authority was granted Jan. 25, 1957, will cost $2.4 million and will have maximum capacity of 110 million cubic feet daily.

Rate cases

● **American Louisiana Pipe Line Co.:** The FPC has suspended until Sept. 18 natural gas tariff changes proposed by American Louisiana Pipe Line. The proposal would raise wholesale rates for two affiliated customers, effective April 15, by $472,000, or 1.1 per cent annually. The new schedule would provide for a demand-commodity charge instead of the cost of service charge prescribed by the FPC.

● **Colorado Interstate Gas Co.:** An FPC presiding examiner has filed a decision, subject to review by the Commission, disallowing a substantial part of two increases effected since 1952 by Colorado Interstate Gas. The first proposed increase, in effect and subject to refund from Jan. 1, 1954 until Feb. 1, 1955, amounted to $9.6 million annually. The second raised rates an additional $10.3 million annually effective Feb. 1, 1955. The company's claim of a fair field price for gas produced from its own reserves could not be sustained as Panhandle Eastern Pipe Line's allowance of a fair field price by the Commission was subsequently reversed by the Court of Appeals. The company has not evidenced a need for more than the amount reached by use of the traditional rate base method. Excess revenue collected in the first filing amounts to $2.9 million and to $15.1 million in the second filing. The company was directed to file a rate schedule which would provide an increase of more than $4.5 million annually over rates prescribed by the Commission in 1952.

● **Gulf Interstate Gas Co.:** The company has filed an application with the FPC for a wholesale natural gas rate increase amounting to $1.9 million, or 8.7 per cent annually. The company's only customer is United Fuel Gas, for whom it transports gas for resale in Ohio, Kentucky and West Virginia. Transportation charges are based on a cost of service arrangement. Proposed increase is based on a 6¾ per cent rate of return as compared with the current 6 per cent return.

● **Natural Gas Pipeline Company of America:** In a decision filed by FPC Presiding Examiner Purdue, $5 million of a proposed $10.7 million increase in natural gas rates charged by Natural Gas Pipeline has been disallowed, and has been ordered refunded. Also to be refunded are any amounts recoverable from Colorado Interstate Gas and Panama Corporation. Natural Gas Pipeline also based its increase on a fair field price for its own production, increased rates charged by Colorado Interstate Gas, and an increase in rate of return from 6 to 6½ per cent. The examiner concluded that a 6 per cent return is fair and reasonable.

● **Olin Gas Transmission Corporation:** The company was granted a wholesale rate increase by the FPC amounting to nearly $1.1 million annually. Affected by the increase are 14 utility customers in Mississippi and Louisiana. The increase was suspended by the FPC in March 1955 and collected subject to refund since Aug. 15, 1955. The company is permitted to retain all amounts collected. In granting an increase in price from 4.66 cents to 10 cents per thousand cubic feet for its own gas production, the FPC found the circumstances in this proceeding to be unique, and the company's operations to have distinctive aspects not found in the usual rate case. The company not only produces gas for its own main line customers but also produces and gathers gas for resale to other pipeline companies. Olin Gas Transmission is the largest producer in the declining Monroe Field and needs an incentive to seek additional supplies. A 6½ per cent rate of return was found to be fair and proper.

● **Texas Eastern Transmission Corp.:** The FPC has received an application from the company for a $11.3 million wholesale natural gas rate increase. Proposed rates would become effective June 10 and would raise gas costs 6½ per cent annually for more than 60 customers in Alabama, Arkansas, Illinois, Indiana, Kentucky, Missouri, New Jersey, New York, Ohio, Pennsylvania, Tennessee, and West Virginia. Increased cost of purchased gas, higher operating costs, higher cost of money, and need for a 6¾ per cent rate of return were among reasons cited in the request.

● **Texas Gas Transmission Corp.:** In an application before the FPC the company seeks an increase in wholesale natural gas rates of nearly $4 million to become effective July 4, 1957. Rates would be raised 4 per cent on an annual basis for 55 utility customers in Illinois, Arkansas, Indiana, Kentucky, Louisiana, Mississippi, Ohio, and Tennessee and is in addition to an $8.2 million increase currently in effect subject to refund. Latest request is due to applications before the Commission requesting higher rate schedules for supplier companies, Tennessee Gas Transmission, Texas Eastern Transmission and United Gas Pipe Line. If suspended, a shorter suspension period is requested to coincide with effective dates of increases by supplying companies.

SUMMARY OF INDEPENDENT GAS PRODUCER RATE FILINGS—APRIL 1957

	Number	Annual Amount
Tax rate increases allowed without suspension	3	$ 8,445
Other rate increases allowed without suspension	21	41,772
Rate increases suspended	8	287,489
Total rate increases	32	337,706
Tax rate decreases allowed without suspension	7	3,390
Other rate decreases allowed without suspension	—	—
Total rate decreases	7	3,390
Total rate filings (all types)	239	—
Total rate filings acted on from June 7, 1954, to April 30, 1957	21,370	—
Rate increases disposed of after suspension (during April)	6	213,083
Amount allowed	2	37,151
Amount disallowed	1	137,863
Amount withdrawn	3	38,069
Rate increases suspended and pending as of April 30, 1957	420	$27,926,808

● **United Gas Pipe Line Co.:** Claiming a 6¾ per cent rate of return, and seeking relief from higher cost of purchased gas and of obtaining capital funds, United Gas Pipe Line has an application before the FPC for a $5.4 million increase in wholesale natural gas rates to be put into effect July 1. Proposed increase would raise the cost of purchased gas 6 per cent annually for 50 customers in Alabama, Florida, Louisiana, Mississippi, and Texas and is in addition to higher rates now being collected subject to refund.

In another FPC action, four off-shore producers were issued conditional permanent certificates authorizing natural gas sales to Tennessee Gas Transmission. Known as the CATCO group, Continental Oil, Atlantic Refining, Tidewater Oil, and Cities Service have leases in the East Cameron, West Cameron and Vermilion areas in the Gulf of Mexico off the coast of Louisiana. Tennessee Gas will construct 107 miles of line to connect these reserves to its system at a cost of $16.3 million. Amended contracts must provide for an initial price of 17 cents per thousand cubic feet (plus a one-cent Louisiana gathering tax). The day after service begins, around Nov. 1, the producers may file for an increase not exceeding 21.4 cents, effective the following day. A higher price will be suspended for 24 hours after which it may become effective subject to refund. The final price, determined at a hearing, will remain in effect until Nov. 1, 1962. Thereafter producers may file for rate increases in each of the subsequent four year periods not to exceed 2 cents per thousand cubic feet. Thus the effective price initially becomes 21.4 cents, with increases limited to two cents every four years, until on Nov. 1, 1986 a maximum price of 35.4 cents is reached and must be maintained until the contracts expire.

Gas lamp for Citizens

The warm glow of gas light draws attention to the new office building of Citizens Gas & Coke. The lamp, formerly a street light in Baltimore, was given to the utility by a Ruud distributor

U. S. S. R. power plant

ACCORDING to reports from Moscow, the construction of the first gas turbine power plant in the U.S.S.R. is approaching completion. Fuel for the turbine will be gas derived from the gasification of coal in place.

Republic Steel issues 'U. S. A. Tomorrow'

TWO HUNDRED INTERVIEWS with leaders in science, business, and government culminated in the publication of *U.S.A. Tomorrow,* an attractive and provocative publication of Republic Steel Corporation. The 40-page booklet describes the past, present, and future of the American economy, and Republic's place in this economy. Special emphasis is placed upon the need for research and mind power to achieve the potentials which exist for the future. Republic's estimates for the gas industry, divided by a "factor of caution" to reach a conservative yardstick, are as follows. "For the decade 1956-65, expenditures for gas utility and pipeline construction are expected to reach $19 billion, of which $14.5 billion is slated for the expansion of transmission and distribution facilities. Demand, which rose from 4.0 to 9.4 trillion cubic feet in the decade ending in 1955, is expected to reach 16.0 trillion cubic feet by 1965. With this increase in distribution, gas appliance sales are expected to rise. In the years 1955-59, for example, gas appliance manufacturers expect to sell 17.5 million ranges, 16.4 million water heaters, 4.9 million central heating units, and 12.4 million space heaters." The publication can be obtained from Republic's general offices, at the Republic Building, Cleveland 1, Ohio.

Surface Combustion starts Canadian company

SURFACE Combustion Corporation, Toledo, Ohio, announces the charter of Surface Industrial Furnaces, Ltd. with offices at 38 Mattson Road, Downsview (Toronto), Ontario. The new Canadian company will engineer and build surface steel mill equipment, heat treat furnaces and glass lehrs. Active management executives of the new company are Ian W. Smellie and John W. Kennedy, both vice-presidents. Other officers are: H. M. Heyn, president; T. F. Loughry, vice-president; and E. P. Heiles, secretary.

Announce building exhibition in London

VISITORS from all over the world are making preparations to attend this year's Building Exhibition at London, which covers every current development in more than 50 related industries. It will be open daily except Sundays, Nov. 13-27. Queen Elizabeth has consented to be patron of the event. Kenneth M. B. Cross, president of the Royal Institute of British Architects, is president of the exhibition for 1957—its 50th consecutive year in the same location. All English architectural, building, and allied trade organizations support the exhibition, many with displays; government departments and their research organizations will also be represented. Groups planning to visit the exhibition may write for further details and advance tickets. The address is: The Building Exhibition, 32, Millbank, London, S.W.1, England.

Gas industry only exhibitor at convention of firemen's group

THE A. G. A. Public Information Bureau together with the public relations department of the Southern California Gas Company and Southern Counties Gas Company sponsored the first exhibit of its kind at the annual convention of the National Fire Protection Association, held at the Statler Hotel, Los Angeles, May 20-24.

A display of cut-away gas appliances was exhibited so the delegates could actually see the fire prevention devices that are built into modern gas appliances. Working models of all types of automatic shut-off devices were carefully explained to the delegates.

Standing beside the exhibit of gas appliances at the NFPA convention are (l. to r.): Art Jones, Southern California Gas; Jack Reade, Southern Counties Gas; C. C. Westmoreland, Southern California Gas; Mrs. Marcia Dessy, who is "Mrs. California"; and Earl L. Rogers, A. G. A. Hollywood Bureau

Also exhibited were cut-away models of the Servel refrigerator, the automatic top burner heat control, top burner timers, a gas dryer, and a forced-air heating model. All were connected to demonstrate properly the safety features of gas appliances.

The successful fire department training film, "Emergency Control of Natural Gas," was shown between sessions during the four days. This film stresses the teamwork of firemen and gasmen in emergencies involving gas.

The exhibit attracted most of the approximately 2,000 firemen attending. To encourage greater attendance, a shoe-shine polish mitt, imprinted with the Blue Flame over the A. G. A. name, was given to all exhibit visitors.

Chief William L. Miller, Los Angeles Fire Department, and chairman of the convention was most grateful, and extended his committee's appreciation to the gas industry for this educational exhibit.

"Mrs. California" (Mrs. Marcia Dessy) graced the exhibit with her charm, and assisted with publicity.

Tap French field

ONE OF FRANCE's largest natural sources of fuel—the gas lying under the Lacq region in the southwest—has just begun to pay off after five years of development. Engineers recently began to tap some of the estimated 14 trillion cubic feet of gas—essentially methane, and rich in sulphur. A sulphur removal plant has been completed; at first it will treat 35.3 million cubic feet of gas a day and send 22.9 million cubic feet a day into the single pipeline which now exists. Cities in the area—just north of the Pyrénées—will get first call on the gas. The yearly capacity of the plant is now 200 million tons of treated gas, 60,000 tons of sulphur, and 400 tons each of propane and butane gas. After progressive stages of expansion, the plant is expected to produce 141.2 trillion cubic feet of gas in 1962. This gas production in Lacq would allow a decrease of 12 per cent in coal imports, and will make France second only to the United States as a producer of sulphur.

ACF realigns

A NEW operating division of ACF Industries, to be called the advanced products division, was established in June as part of a major realignment of the company's products and plants. Manufacture of products for the petroleum, gas, chemical, and nuclear energy industries will be concentrated in the new division. President of the new division will be Rudolph Furrer, ACF vice-president of manufacturing and engineering.

Student's storage dome model wins prize

A WORKING MODEL of a gas storage dome won third prize in the physiological science category at a county science fair for the daughter of a Washington (D. C.) Gas Light Company employee. Melinda, 14-year-old daughter of Arthur E. Stack, the utility's utilization laboratory superintendent, was qualified to enter the operational model at the county science fair after her project had won first prize in the physiological science category at her school's annual science fair. She is an eighth grade student at Takoma Park Junior High School.

While still undecided on a subject for her entry in the fair, Melinda heard her father speak of Washington Gas Light's proposed underground storage project at Brandywine, Maryland, and some of the work connected with it. A visit with her father to the office of H. B. Noyes, the utility's senior vice-president, then laid the groundwork for her prize-winning effort. There she saw underground storage dome models, charts, and drawings of the various earth strata necessary for successful gas storage, and received a briefing on the basic fundamentals of underground storage. Following this, she spent many hours in the library doing research.

She built the gas dome and operational parts within a medium-sized aquarium. First, the various strata of the earth were hand drawn, colored, labeled, then pasted on the inside front. The dome was left open and later filled with fine gravel to represent sandstone.

Melinda, 14-year-old daughter of Arthur Stack, utilization laboratory superintendent of Washington Gas Light, won third prize at a county science for her model of a gas storage dome

What's behind the glass front? Mainly a record-player motor, a coffee can, and a child's balloon.

Manufacturers announce new products and promotions

PRODUCTS

● General Controls announces the production of a new, silent, solenoid gas valve whose working parts are all sealed in a liquid-filled, hermetically sealed head. This new valve, the K-3H, reduces installation costs by eliminating a bleed line. New compactness and ability to be mounted in any position on a horizontal pipe run makes the high-capacity K-3H particularly applicable for use with all gases on all types of equipment. General Controls also announces production of a new Tempotherm 365 thermostat, providing completely automatic clock thermostat control of both heating and cooling, with automatic night setback and morning pickup for each. Lowered night setback on the cooling side permits better humidity control and helps to offset the load of maximum daytime temperature by storing cooling capacity effectively.

● A three-spit Rotomatic rotisserie highlights the new 40-inch Roper Gourmet gas range. Spits and rack lift out for easy cleaning and storing. Features included on the range are the Tem-Trol automatic top burner heat control, Tem-Trol automatic built-in griddle, three new Circle-Simmer top burners, Roast-Minder oven control, and Insta-Matic oven guardian.

● The plumbing and heating division of American-Standard is manufacturing a new water heater line, which includes four gas models. These are as follows: the Arcosteel standard, with 20, 30, and 40 gallon capacities; Arcosteel deluxe, with 20, 30, 40, and 50 gallon capacities, medium priced, incorporating extra features such as magnesium anode, extra-fast recovery, concealed draft hood, and a ring-type base; Arcoglas standard, with 20, 30, 40, and 50 gallon capacities, similar to the Arcosteel deluxe but with higher input; Arcoglas deluxe, with 30, 40, 50, and 65 gallon capacities, with special features including concealed yet accessible controls, solid ring-type pedestal, extra-thick fiberglass insulation, and extremely fast recovery.

● A completely restyled gas range line is being manufactured by Norge. The line consists of two models in the custom series, and three models in the lower-priced deluxe series. Customer range features are center simmer burners and automatic top burner heat control. The 36-inch model has an extra-large (21-inch) oven.

● A cool cabinet unvented heater that hangs on the wall is being made by Temco. Its combustion housing is coated with Temco's Ceramic-Clad, a high-temperature porcelain enamel that will not rust or burn out. Warm air is discharged from a metal mesh TV-styled grill finished in porcelain enamel.

PROMOTIONS

● A new 16 mm. sound film, "The Fundamental Principles of Dry Positive Displacement Meters," has been produced by the Sprague Meter Company.

● Modern gas chemistry and its ability to upgrade and protect metals in quality heat treating is described in the new bulletin, SC-178, published by Surface Combustion Corporation. The bulletin devotes a section to carbon control, and shows installation pictures and a chart for the use of generated gas atmospheres.

● Rockwell offers two new publications: one is a 110-page gas meter repair manual, which provides complete instructions with illustrations on the repair of Rockwell's entire gas meter line; the other is a revised 43-page bulletin (V-203, Rev. 1) covering the entire Rockwell-Nordstrom semi-steel valve line.

● U. S. Steel is offering consumers a *Kitchen Planning Book,* which features a state-by-state directory of dealers' names, addresses, and a listing of the brands they carry. The booklet was offered in four of U. S. Steel's TV commercials.

● A catalogue of a complete line of vent pipe and fittings for gas-burning devices has been issued by the Dura-Vent Corporation.

Indiana Gas elects Schiesz board chairman, Horstmann president

L. B. SCHIESZ, formerly president of Indiana Gas & Water Co., was elected chairman of the board. Herman G. Horstman, vice-president of the company since 1955, was elected president.

Mr. Schiesz started in the utility industry as an accountant. He became vice-president and director of the former Central Indiana Power Company and affiliated companies in 1923, and president from 1937-41. In 1941 he became first vice-president and director of Public Service Company of Indiana.

When Indiana Gas & Water Company was organized in 1945, he became president and director. He is a past president of the Indiana Gas Association and a director of the Independent Natural Gas Association of America.

Mr. Horstman has had over 37 years of public utility experience in various engineering, operating, and executive positions. Prior to joining Indiana Gas & Water in 1955, he was assistant to the president of Texas Gas Transmission Corporation.

Fred W. Dopke, who has been a vice-president of the company since it was organized, was elevated to first vice-president.

All three men are members of A. G. A.

L. A. Nichols succeeds Howard J. Underhill as president at Superior

HOWARD J. UNDERHILL has resigned as president of Superior (Wis.) Water, Light and Power Company, and will continue with the company as a member of the board and consultant. L. A. Nichols, for the past year vice-president and general manager, succeeds Mr. Underhill as president and retains the post of general manager. At the same time the company announces that R. G. Rockwood has been promoted to general sales manager.

Mr. Nichols, a graduate of George Washington University, was employed by two Wisconsin utilities before joining Superior as a sales engineer in 1935. He became general sales manager in 1942, and vice-president in 1956.

He is a member of the American Gas Association.

Mr. Underhill has been in the utility industry for 30 years, starting with the Great Northern Power Company in 1907. Before joining the Superior utility, he was employed by the Minnesota Power and Light Company, of which he is now a director. He joined Superior in 1935 as vice-president and general manager, and was elected president in 1941.

Mr. Rockwood, a graduate of the Duluth Business University, joined Superior in 1939. He has held numerous positions in the sales department, most recently that of commercial sales manager.

Personal and otherwise

Consolidated Edison elects Manz, Meytrott

OTTO W. MANZ JR. has been elected executive vice-president of Consolidated Edison Company of New York. C. Wesley Meytrott has been elected vice-president of sales, succeeding Mr. Manz. The election of Mr. Manz re-establishes the post of executive vice-president which had been abolished in 1955.

Mr. Manz joined Brooklyn Edison, a Con Edison predecessor, as an engineering assistant in 1925 and became a division engineer of that company by 1941. During World War II he was loaned to Union Carbide and Carbon Corporation, and returned to Con Edison in 1946. He was named manager of system operation in 1950, assistant vice-president in 1954, and vice-president the same year. During the past year, he was in charge of the company's sales operations in Manhattan, Brooklyn, Queens and the Bronx.

He is a graduate of the University of Pennsylvania.

Mr. Meytrott has been associated with the utility's sales activities since 1933. He had been assistant vice-president since 1953. He was graduated from the Massachusetts Institute of Technology in 1927.

He joined New York Edison, a Con Edison predecessor, in 1933 as a commercial engineer. Before that he had served in executive sales posts with the Florida Power Corporation and the Ohio Electric Company.

NEGEA Service names Wright sales director, Schloman assistant

ROY E. WRIGHT has been appointed director of gas and electric sales for the NEGEA Service Corporation of the New England Gas and Electric Association. Frederick A. Schloman has been appointed assistant director of gas and electric sales for the corporation.

A graduate of Rensselaer Polytechnic Institute, Mr. Wright has had 34 years' experience in the gas industry, starting as a cadet engineer for Henry L. Doherty Company in Toledo, Ohio. He joined New England Gas and Electric System in 1930 as supervisor of househeating and commercial sales and in 1936 was named director of all gas sales for the system.

Mr. Wright has long been active in American Gas Association committee work and is a past president of the New England Gas Association. He is presently vice-chairman of the Industrial and Commercial Gas Section of A. G. A., and secretary of the Guild of Gas Managers of New England.

Mr. Schloman has had 31 years of experience in the utility industry starting as a cadet engineer with the Alexandria Light & Power Company in Virginia. He became power and lighting engineer of the northern division, Virginia Lighting and Power Company, and then joined the promotion department of the New England Gas and Electric System in 1928 as assistant to the sales director. He was named coordinator of electric sales in 1949.

He is treasurer of Region One of the Public Utilities Advertising Association.

Smith of Columbia Gas System assigned to A.G.A.

Robert B. Smith

ROBERT B. SMITH, coordinator of research for the Columbia Gas System Service Corp., has been assigned temporarily to the American Gas Association to fill the newly-created post of manager of air conditioning research under the PAR Plan. The assignment was announced by George S. Young, president of the Columbia Gas System, Inc.

Mr. Smith, who will supervise the A. G. A.'s accelerated research program in air conditioning, was graduated from Ohio State University in 1948 with a degree in mechanical engineering. He joined Columbia Gas System as a junior engineer, advanced to engineer and then to coordinator of research.

He has been active in A. G. A. since 1951, with service on the Marketing Research Committee, on Subcommittee 8 of B31, and the Task Group for Air Conditioning.

Gemmel vice-president

WILLIAM A. GEMMEL has been elected vice-president and secretary-treasurer of South Jersey Gas Company, Atlantic City. Mr. Gemmel entered the gas industry in 1939 as a bookkeeper with Public Service Electric and Gas Company in Newark, New Jersey, and was transferred to South Jersey in 1948 as an accountant. Six months later he was appointed secretary-treasurer of the firm. He is a graduate of New York University School of Commerce, a member of the American Gas Association, and a member of the board of directors the New Jersey Gas Association.

Elect Arden, Robertshaw

T. T. Arden

THOMAS T. ARDEN has been elected chairman of the Robertshaw-Fulton Controls Company, and the former president, John A. Robertshaw, has been elected president of the board. Mr. Robertshaw immediately announced the formation of a three-man Executive Committee headed by Richard S. Reynolds Jr., former board chairman. The committee includes Mr. Robertshaw and Mr. Arden.

Mr. Arden, executive vice-president of the firm since 1947, will assume his new duties immediately. He was in charge of the company's Western operations, including two manufacturing divisions and a research center, now nearing completion. Active in industry affairs, he was president of Gas Appliance Manufacturers Association in 1954-1955, and is current president of Pacific Coast Gas Association.

Mr. Robertshaw was president of the company since 1947. Prior to that time, he was president of Robertshaw Thermostat Company, Grayson Heat Controls Ltd., and American Thermometer Company. A veteran controls executive, he has spent most of his business career selling and manufacturing automatic devices.

W. M. Elmer elected president of Texas Gas

W. M. Elmer

W. M. ELMER has been elected president of Texas Gas Transmission Corporation, Owensboro, Kentucky. He replaces the late W. T. Stevenson.

Mr. Elmer has been executive or senior vice-president and a director of the company since 1955, a vice-president since 1950, and president and a director of Texas Gas Exploration Corporation since 1953.

Mr. Elmer was graduated from the University of Illinois with a bachelor of science degree in 1936. He joined Texas Gas in 1947, and was elected comptroller in 1948. In 1950 he was elected vice-president and treasurer, and in 1955, senior vice-president. He became executive vice-president of the company in April of this year.

Prior to the formation of Texas Gas, Mr. Elmer was employed as comptroller of one of its predecessors, Memphis Natural Gas Company. Before that he was employed as an accounting manager at Arthur Andersen & Company.

He is chairman of the Rate Committee of the Independent Natural Gas Association of America, and a member of the American Gas Association.

Tanner Trans-Canada chairman, Coates president

N. E. TANNER, formerly president, has been elected chairman of the board of Trans-Canada Pipe Lines, Ltd. Charles S. Coates, formerly executive vice-president and general manager of the company, has been elected president. Mr. Tanner's offices will be at Calgary, and Mr. Coates will remain in Toronto.

Mr. Tanner became president of the company in 1954. He had previously been elected to the Alberta legislature in 1935, became Speaker of the House and later Minister of Lands and Mines, which position he held until 1952, when he resigned to become president of Merrill Petroleums, Limited.

Mr. Coates started in the oil industry in 1936 and has been associated with the natural gas and petroleum industry since that time. In 1943 he joined the Tennessee Gas Transmission Company as division pipeline superintendent, and served in various engineering, construction, and operating positions. He became vice-president at Tennessee in 1948, and senior vice-president in 1951. He left in 1954 to join Trans-Canada as executive vice-president and general manager.

Mr. Coates is a member of the American Gas Association.

Leslie Fletcher retires as Providence president; Guy Henry succeeds

R. LESLIE FLETCHER, president of Providence (R. I.) Gas Company, is retiring from his post but will remain on as a member of the board of directors. Elected to succeed him starting Aug. 31 is Guy T. Henry, president of East Tennessee Natural Gas Company, Knoxville.

Providence Gas has announced the resignation of Edmund C. Mayo from the board of directors to make room for the new president who, by corporation procedure, must be elected to the board.

Mr. Fletcher, the eighth man to head the utility in its 110-year history, has been with the utility since 1918. After holding posts in various engineering capacities, he became vice-president of the company in 1941, and president in 1948. He is a past president of the New England Gas Association, and a member of the advisory council and a past director of the American Gas Association.

Arthur Herwig honored on retirement as WUA executive secretary

ARTHUR FRANTZ HERWIG, who retired May 31 as executive secretary of the Wisconsin Utilities Association, received special honors at the group's recent annual dinner for installation of officers.

G. W. Van Derzee, past president of the association, presented a gift to him in behalf of the group's associate members, "as evidence of their sincere appreciation for his continuous friendly cooperation and genuinely dedicated service."

Retiring WUA President Richard W. Leach, president of Wisconsin Natural Gas Company, presented to Mr. Herwig a bound book of congratulatory and felicitous letters from the men Mr. Herwig had worked most closely with over the years—past presidents and members of the board of WUA.

Mr. Herwig, a former newspaper reporter and editor, began his utility career in 1920, when he was named director of the old Wisconsin Utility Information Bureau. In 1934 he became executive secretary of the Wisconsin Utilities Association.

Succeeding Mr. Herwig as executive secretary of the Wisconsin Utilities Association is Dale F. Hansman.

James vice-president

LOUIS G. JAMES has been elected a vice-president of the Lone Star Gas Company, Dallas, and its wholly-owned subsidiary, the Lone Star Producing Company. He will continue to hold the post of comptroller for Lone Star. Mr. James began his career with Lone Star in 1923 as a clerk in the chart department and in 1926 was made a cashier and bookkeeper. He then served as traveling auditor, then chief auditor prior to being appointed general auditor in 1935. He became assistant comptroller in 1952 and comptroller in 1954. He is active in A. G. A.

New ASME secretary

OSCAR B. SCHIER II has been designated secretary-elect of The American Society of Mechanical Engineers, to succeed Clarence E. Davies, who will retire as secretary after 23 years of service in this office. The post of secretary is the chief administrative office of the 50,000-member society. Mr. Schier has been a member of the society since 1932, and a member of the staff in various capacities for the past 11 years. He was elected assistant secretary in 1953 and advanced to the post of deputy secretary last December. He was formerly with Consolidated Edison.

Williamson manager

JOHN G. WILLIAMSON has been named general manager of the gas department of The Kansas Power and Light Company. He succeeds the late Clifford E. Brock, vice-president with supervision of gas and electric properties and director of the company, who died last month. Mr. Williamson has been with the utility since last year in the capacity of superintendent of gas operations, following employment with the Western Kentucky Gas Company. He is a graduate of the University of Tulsa and a member of the American Gas Association.

Kayser chairman, Boyd vice-chairman of Pacific Northwest

MAJOR CHANGES in top management of Pacific Northwest Pipeline Corporation were announced recently by El Paso Natural Gas Company, which acquired a 99 per cent stock interest in the firm.

Paul Kayser, president of El Paso Natural Gas, was elected board chairman of Pacific Northwest Pipeline. He replaces Ray C. Fish.

Howard Boyd, El Paso's vice-president and assistant general counsel, was elected vice-chairman of the Pacific Northwest board, succeeding C. R. Williams.

Mr. Fish and Mr. Williams will continue as members of the board. Two vacancies were created with the resignations of Robert R. Herring and Norman V. Kinsey.

Stuart F. Silloway continues as president of Pacific Northwest.

Names in the news—a roundup of promotions and appointments

UTILITIES

Edward Emerson Jr. has been appointed employee relations manager of New York State Natural Gas Corporation. He will oversee personnel administration and labor relations, the safety program, and annuities and benefits administration. He will also supervise wage and salary administration and job training. Mr. Emerson joined the company's personnel department in 1953 after service with a sister company.

Peoples Gas Light & Coke Company announces that **Chris J. Poppelreiter** was appointed construction engineer in the engineering department. He was formerly superintendent of Chicago District Pipeline Co., a subsidiary. He is succeeded in the latter post by **Raymond P. Lynch,** formerly assistant superintendent. **Clifford D. Older,** formerly supervisory engineer in the engineering department of Peoples Gas, succeeds Mr. Lynch.

New member of the board of directors of Michigan Consolidated Gas Company is **Ray R. Eppert,** executive vice-president of Burroughs Corporation.

Vernon B. Stouffer has been elected a director of Consolidated Natural Gas Company, succeeding **Carl N. Osborne.** All other directors and officers were re-elected.

All directors and officers of Wisconsin Public Service Corporation were re-elected at the recent annual meeting. One new director, elected to fill the vacancy caused by the death of W. G. Whyte, is **A. G. Bur.**

Upon retirement of **J. C. Gilbert** as manager of Southern Counties Gas Company's Santa Monica Bay Division, the utility announced the appointment of **William C. Bullock** as his successor. **Edward B. Patterson,** sales manager in the company's Orange County division, has been named to succeed Mr. Bullock as Harbor division manager. The new Orange County sales manager is **Robert M. McIntyre.**

MANUFACTURERS

Maytag Company announces that **Roy A. Bradt,** vice-president in charge of marketing, will retire Sept. 1. He will serve out his term on the company's board of directors. He started with Maytag in 1916 in the company's machine shop, and progressed through positions including those of advertising manager, associate sales manager, and, since 1928, vice-president and director. Succeeding Mr. Bradt is **Claire G. Ely,** associated with Maytag since 1924, and general sales manager for the past three years. The company also announces the appointment of **James B. Bates** as regional sales manager in its Richmond branch.

John J. Carroll has been elected a vice-president of Neptune Meter Company. He succeeds **Wentworth Smith,** who has been named executive in charge of all meter operations for Neptune.

New vice-president in charge of Selas Corporation's fluid processing division is **Kurt W. Fleischer.** His post includes engineering and sales supervision of Selas Constructors, a subsidiary. Mr. Fleischer has been with the firm since 1943.

Earle M. Jorgensen, president of Earle M. Jorgensen Company, steel distributors, has been elected a director of Rheem Manufacturing Company.

The appointment of **Frank Kalinowski** as sales promotion manager has been announced by Iron Fireman Manufacturing Company.

The Pennsylvania Range Boiler Company has appointed **Sam Alewitz** as chief engineer of product design and development. He was previously associated with the American Gas Association as test engineer, and Richmond Radiator Company as design and development engineer.

Charles N. Perry, purchasing agent for Rockwell Manufacturing Company's Oakland plant, for the past five years, has been named factory manager of the company's new Porterville (Calif.) plant.

New assistant sales manager of General Controls' appliance controls division is **Morris P. Stillinger.**

Robert G. Watkins has been named Michigan district manager for Armstrong Furnace Company.

The Permaglas division of A. O. Smith Corporation reports that **H. L. Balthazar,** formerly supervisor of marketing services, has been named assistant sales manager, domestic water heaters; and **V. H. Swearingen,** formerly Mr. Balthazar's assistant, replaces him as marketing services supervisor.

The promotion of **James E. Doughty** as assistant to the national manager of home laundry equipment sales was announced by Norge division, Borg-Warner Corporation. His offices will be at Norge's Chicago headquarters.

New purchasing agent for John Wood Company's heater and tank division is **Meredith L. Addy,** who has been with the company since 1929. This division also has a new district manager—**Don Gibson**—for the Cleveland area, and a new manufacturers' agent—**John Q. Woodruff**—for Utah, Montana, Nevada, Idaho, and western Wyoming.

Sprague Meter reports the appointment of **Thomas J. Watt** as advertising manager. He has been associated with Sprague since 1929, serving in cost, production, engineering, sales, and most recently as works manager. He will also act as service manager for Sprague. **Robert G. Burr,** associated with Sprague since 1949 as a laboratory technician, in engineering capacities, and as customer service engineer, has been named assistant advertising manager and assistant service manager.

PIPELINES

John S. Ivy, consulting geologist and petroleum engineer, was elected to the board of Texas Eastern Transmission Corporation to fill the directorship vacated by George **T. Naff,** vice-chairman, who retired.

Robert O. Parker, since 1954 supervisor of the accounting department of Trunkline Gas Company, has been named assistant controller.

Appointment of T. L. McWilliams as assistant superintendent of Texas Gas Transmission Corporation's compressor station department has been announced. Mr. McWilliams has been with the company and its predecessor since 1936.

Martin K. Hager, president and a director of Panhandle Eastern Pipe Line Company's subsidiary, Century Refining Company, has been elected to the board of the parent company.

Top-notch suggestion

T. A. Zamirowski (r.) of Peoples Gas receives from Chairman E. I. Bjork a check for $1,850—the largest amount ever awarded by the utility for a suggestion. The utility, after a year of study, estimated that his idea of substituting aluminum tubing when repairing copper tubing in automatic gas water heaters and space heating equipment would save 3,147 service calls yearly

OBITUARY

R. G. Griswold

gas industry leader and a charter member of the American Gas Association, died recently at the age of 77.

Following graduation from the University of Wisconsin, Mr. Griswold started in the gas industry as a cadet with the Denver Gas and Electric Company. In 1906 he became a gas engineer of that company, and later of its successor, Denver Gas and Electric Light Company. In that capacity, he designed concrete purifiers for gas, and designed a district heating distribution system and rates for central station district heating. He was also in charge of the utility's training school for college graduates.

In 1912 he was transferred to the New York office of Henry L. Doherty, founder of Cities Service, and was engaged in research for three years. In 1915 he became chief technologist of the Henry L. Doherty firm, a post he held until 1936. Following that, he filled a similar post with Cities Service for two years.

In 1938, he was elected president of Electric Advisers, Inc., a Cities Service subsidiary. When Electric Advisers dissolved on Jan. 1, 1950, he joined the parent company for a short period until his retirement on Aug. 1, 1950.

Mr. Griswold remained a continuous member of the American Gas Association from 1918 until his death. He had served as chairman of various committees of the former A. G. A. Technical Section, and presented various technical papers before A. G. A. conferences and conventions.

Among the survivors of Mr. Griswold is his son, Gordon C. Griswold, who is vice-president and treasurer of The Brooklyn (N. Y.) Union Gas Company.

H. R. Searing

62, who rose from a $10 a week telephone operator to become chairman of the board of the Consolidated Edison Company, died June 27.

Mr. Searing left school at 14 to join the New York Edison Company as a night telephone operator. Two years later he moved to United Electric Light and Power Company as a meter tester. He took night college courses, and received a B.S. degree in engineering from Cooper Union in 1916. Following service during World War I, he rejoined Union Electric as an assistant engineer.

In 1932 he was appointed general superintendent of distribution for both New York Edison and United Electric. In 1939, following the merger of the Edison and United companies, and the subsequent union of both with Consolidated Gas Company and others, he was named engineer of operations for the new Consolidated Edison Company of New York.

A year later he was elected vice-president in charge of gas and electric operations and electric production. Later, gas production was also put under his jurisdiction.

Mr. Searing became executive vice-president and a trustee of Consolidated Edison in 1944. He was elected president in 1949, and four years later was named chief executive officer. He retained the latter post when he was elected chairman of the board in 1955.

G. P. Egleston

past president of the Pacific Gas Association, and a member of the American Gas Association from 1919 through 1957, died June 8 at the age of 77.

At the time of his death, Mr. Egleston was chairman of the board of the H. R. Basford Company, San Francisco, distributors of gas appliances. At Basford he had held the posts of general manager starting in 1933, president from 1952-56, and then chairman.

He had previously been associated with Portland (Ore.) Gas and Coke Company as sales manager, Coast Counties Gas and Electric Company as new business manager, and Ruud as general manager.

Robert Philipps Jr.

retired general manager of the gas department of Public Service Electric and Gas Company of New Jersey, died recently at the age of 67. Mr. Philipps, a graduate of Stevens Institute of Technology, joined Public Service in 1911 and served as engineer in the Hudson and Essex County divisions. He was general superintendent of gas manufacture before becoming general manager of the gas department. He retired three years ago.

Mr. Philipps had the honor of being one of the first members of the American Gas Association. He first joined A. G. A. in 1918, and remained a member without interruption for 38 years.

Frank Hall

executive assistant with the Michigan Consolidated Gas Company since 1954, died May 31 at the age of 68. He would have completed his 55th employment anniversary in mid-August.

Mr. Hall began his career with the utility as a messenger, with chief duties as a water boy. Although his formal education ended at the sixth grade, he took correspondence courses in drafting and attended night school.

Though he was in the field for a while, Mr. Hall spent virtually his entire career in the street department. He worked in drafting 12 years, the last three as chief draftsman. He was superintendent of the street department from 1919 to 1945, later became superintendent of the distribution plant, then executive assistant to Roland R. Paulin.

He was a member of the American Gas Association.

CONVENTION CALENDAR

1957

JULY

22-26 •Western Summer Radio-Television and Appliance Market, Western Merchandise Mart, San Francisco, Calif.

SEPTEMBER

3-5 •Pacific Coast Gas Association Convention, Fairmont and Mark Hopkins Hotels, San Francisco, Calif.

6 •New Jersey Gas Association, Annual Meeting, Spring Lake, N. J.

13-14 •Maryland Utilities Association, Annual Fall Conference, Cavalier Hotel, Virginia Beach, Va.

16-18 •Annual A. G. A. Accident Prevention Conference, Sheraton-Jefferson Hotel, St. Louis, Mo.

18-20 •Southeastern Gas Association Convention, Robert E. Lee Hotel, Winston-Salem, N. C.

OCTOBER

7-9 •A. G. A. Annual Convention, Kiel Auditorium, St. Louis, Mo.

NOVEMBER

4-8 •National Metal Exposition, Chicago, Ill. (A. G. A. will exhibit)

11-15 •National Hotel Exposition, Coliseum, New York City. (A. G. A. will exhibit)

13-15 •American Standards Association Conference and Annual Meeting, San Francisco, Calif.

14-16 •The American Society of Refrigerating Engineers, Semi-Annual Meeting, Shoreland Hotel, Chicago, Ill.

18-22 •National Warm Air Heating and Air Conditioning Association, Hotel Morrison, Chicago, Ill.

DECEMBER

1-6 •The American Society of Mechanical Engineers, Annual Meeting, Hotel Statler, New York City.

1958

MARCH

17-21 •National Association of Corrosion Engineers, Annual Conference and Exposition, San Francisco, Calif.

20-21 •New England Gas Association, Annual Meeting, Hotel Statler, Boston, Mass.

24-26 •Mid-West Gas Association, Broadmoor Hotel, Colorado Springs, Colo.

27-28 •Oklahoma Utilities Association, Annual Convention, Biltmore Hotel, Oklahoma City, Okla.

Personnel service

SERVICES OFFERED

Tar Emulsion Specialist—with 35 years' experience in breaking and preventing stable tar emulsions, offers consulting service. 1871.

Executive position—experienced gas and electric utility. Licensed professional engineer with 11 years' experience in engineering, construction and sales on supervisory level. Age 35, married. 1872.

Sales Manager or Heating and Air-Conditioning Manager—college graduate. Sixteen years' experience in home appliance, heating and air-conditioning retail sales. Fully experienced in sizing equipment, making layout and supervising installation of both heating and cooling. Ten years with utility. Four years sales manager. Top references. 1873.

Manager—for small gas operation or department head for medium size operation. Broad experience covers top management, sales, customer service, distribution and other related department functions. 1874.

Director of Research-gas fired heating product. boilers, water heaters, and warm air heating equipment. Familiar with A. G. A. requirements and procedures. Have good record of developing successful product. Formerly operated a utility testing laboratory. B.S. in chemical engineering and available immediately. 1875.

Sales Manager—recently associated with Servel, Inc., in a management capacity, available only because of elimination of field selling organization. Twenty years' experience at factory level with top name companies. Strong utility background, basically trained in retail work with Philadelphia Combinatfon Property. Broad experience in the applianee business, with good contacts in Eastern U.S. Engineering background. Salary desired $10,000. 1876.

Public Relations Director—broad experience in all phases of public relations. Sound approach to community and customer relations. Publicity materials with a purpose. Would re-locate. 1877.

Factory Sales Representative—with over 20 years' experience, seeks new connection with a reputable manufacturer, promoting and merchandising domestic gas appliances, preferably in the New York-New Jersey areas. Top notch performance and references. 1878.

Service Supervisor or Commercial Representative—16 years' experience. At present employed as assistant service manager for commercial and domestic service company. Would like position in New York State or Connecticut. 1879.

Training Director—Sales and Personnel—practical background with thorough understanding of motivation, group and individual training, follow through. Experienced in recruitment and employment methods. Would be willing to relocate. 1880.

Gas Engineering Executive—B.Sc. in Chemical Engineering. Broad experience in engineering, operations, and management of transmission and distribution systems. Thorough knowledge of pipeline design, construction, economics, contracts, customer relations, and utilization. Author of many technical articles and well versed in report writing. Returning to U.S. in October having been chief engineer and superintendent of gas transmission pipeline overseas. Desires executive operating or planning position in gas consulting, construction, or operations. International contacts and excellent references. 1881.

Sales Manager—Approximately 20 years of utility experience, 11 years sales manager's experience on domestic and house heating appliances. Capable of complete organization and training of any utility sales department on domestic and house heating appliances. Preparation of sales and promotion budget—sales studies. Dealer promotion and training. General knowledge of advertising and campaign promotions. Top utility and manufacturers references. (46) Married. 1882.

POSITIONS OPEN

Superintendent Gas Production and Distribution—Panama—supervisory—experience over gas manufacturing plants and general knowledge of gas distribution. Age: 28-45. M.E. or C.E. degree preferred. Spanish if possible. For interview consideration send complete resume to Manager of Corporate Personnel, American & Foreign Power Co., Inc., 2 Rector Street, New York 6, New York 0842.

Engineering Designer—M.E. or an equivalent combination of technical training and practical experience in design and test of gas fired warm air heating equipment. Multi-plant corporation provides exceptional growth opportunities, with this starting position in its eastern division. Operations include a complete line of warm air and wet heat, gas and oil fired residential equipment. Please submit complete resume for our confidential examination. 0843.

Young Engineers—Philadelphia utility with divisions in Eastern Pennsylvania can use three recent engineering graduates. Will be given groundwork in all departments of company before regular assignment. In reply please state age, education, experience—if any. 0844.

Engineers—Philadelphia utility can use two engineers experienced in gas distribution. Please state age, education, experience and other background information in replying. 0845.

Gas Distribution Engineer—excellent opportunity available for qualified engineer in an integrated natural gas utility company in the Southwest. Must be experienced in gas distribution work. Preferably age 30 to 40. Attractive salary, good opportunities for advancement and excellent employee benefits. 0846.

Manager—manufactured gas property in New England. Strong promotional background desired. 0847.

Plant Manager—Aggressive, ingenious, forceful man capable of taking charge of operation of small plant manufacturing furnaces and heating equipment located in Pittsburgh area. Must know plant engineering, labor relations, scheduling, industrial engineering, tools, dies and machinery. For person seeking permanent position with constantly increasing potential, this is an excellent opportunity with a fast-growing company. Submit full details about self and past experience. State salary expected. 0848.

Recoverable gas

(Continued from page 39)

produced 413 billion cubic feet, equal to 79 per cent of its all-time high.

On the assumption that the future production of natural gas will amount to at least 1,200 trillion cubic feet, a pattern of the shape of the long-term rise and ultimate decline of production in the United States is presented in Figure 12. By this projection, it is indicated that the all-time peak of production may approximate 20 trillion cubic feet per year by 1980-90. This is crystal ball gazing in big figures. But, bearing in mind that the 1,200 trillion cubic feet figure is taken as a conservative minimum, we expect that future reviewers will probably find the curve too small and the indicated peak to occur later than here forecast.

The moral of our story is simple. The gas industry should enjoy a rapidly growing and long time future prosperity, but at least 80 per cent of the supply of gas needed for its future progress consists of gas yet to be discovered. The day of surplus gas and cheap gas is over. From here on, the consumers will have to pay the increasing costs of the producers and explorers, who will need to be accorded sufficient profit and freedom of action to stimulate them to continue exploring for new reserves of natural gas.

Domestic consumption of natural gas totaling 10.1 trillion cubic feet in 1956 is estimated to increase to 16.0 trillion by 1966, including 0.8 trillion supplied by imports.

The total future recoverable supply of natural gas cannot be estimated. But reasoning is presented to indicate that, so far as may be judged by present evidence, the supply recoverable from presently proved reserves and from future discoveries in the United States, including offshore production, will exceed 1,200 trillion cubic feet.

REFERENCES

[a] *Kenneth E. Hill, Harold D. Hammar and John G. Winger,* "Future Growth of the World Petroleum Industry," presented before the American Petroleum Institute, Division of Production, Casper, Wyoming, April 23, 1957.

[b] *Kenneth E. Hill and John G. Winger,* "Future Growth of the West Coast Petroleum Industry," presented before the American Petroleum Institute, Division of Production, Los Angeles, California, May 16, 1957.

[c] *Dr. Paul F. Genachte,* "Moving Ahead with the Atom," The Chase Manhattan Bank, January 1957.

[d] *Frederic H. Lahee,* "Trends in Exploration," presented before the American Petroleum Institute, Division of Production, Shreveport, Louisiana, March 20, 1957.

[e] *Lyon F. Terry,* "The Future Supply of Natural Gas," 1950 Proceedings, American Gas Association, pp. 155-159.

[f] *Lewis G. Weeks,* "Highlights on 1947 Developments in Foreign Petroleum Fields," American Association of Petroleum Geologists, Vol. 32, p. 1094, 1948.

[g] *Department of Interior, Bureau of Mines,* "Impact of the Peaceful Uses of Atomic Energy on the Coal, Oil and Natural Gas Industries" to the Joint Committee on Atomic Energy, Vol. 2, p. 82, January 1956.

SOURCES OF DATA

United States Bureau of the Census
United States Bureau of Mines
American Gas Association
American Petroleum Institute
American Association of Petroleum Geologists
Oil and Gas Journal
World Oil

A.G.A. advisory council

E. R. ACKER.....Poughkeepsie, N. Y.
B. C. ADAMS.....Kansas City, Mo.
FRANK H. ADAMS.....Toledo, Ohio
F. M. BANKS.....Los Angeles, Calif.
L. L. BAXTER.....Fayetteville, Ark.
L. E. BIEMILLER.....Baltimore, Md.
DUDLEY B. W. BROWN...New York, N. Y.
J. H. CARSON.....Cleveland, Ohio
GLENN W. CLARK.....St. Louis, Mo.
SHELDON COLEMAN.....Wichita, Kans.
J. H. COLLINS SR.....New Orleans, La.
J. F. DONNELLY SR.....Milwaukee, Wis.
E. H. EACKER.....Boston, Mass.
E. R. EBERLE.....Newark, N. J.
RALPH L. FLETCHER.....Providence, R. I.
N. HENRY GELLERT.....Seattle, Wash.
W. G. HAMILTON JR.....Philadelphia, Pa.
R. M. HESKETT.....Minneapolis, Minn.
FREDERIC O. HESS.....Dresher, Pa.
J. K. HORTON.....San Francisco, Calif.
PAUL KAYSER.....El Paso, Texas
A. W. LUNDSTRUM.....Columbus, Ohio
EARLE J. MACHOLD.....Syracuse, N. Y.
H. N. MALLON.....Dallas, Texas
J. F. MERRIAM.....Omaha, Neb.
L. B. RICHARDS.....Harrisburg, Pa.
LOUIS RUTHENBURG.....Evansville, Ind.
FRANK C. SMITH.....Houston, Texas
E. CARL SORBY.....Rockford, Ill.
R. G. TABER.....Atlanta, Ga.
PAUL R. TAYLOR.....Houston, Texas
TOM P. WALKER.....Houston, Texas
T. WEIR.....Chatham, Ontario
GEORGE E. WHITWELL...Philadelphia, Pa.
CHARLES G. YOUNG....Springfield, Mass.
R. H. WITTMANN.....Chicago, Ill.

PAR COMMITTEE

Chairman—Wister H. Ligon, Nashville Gas Co., Nashville, Tenn.

General Promotional Planning Committee
Chairman—Christy Payne, Jr., The Peoples Natural Gas Co., Pittsburgh, Pa.

General Research Planning Committee
Chairman—Samuel Green, The Brooklyn Union Gas Co., Brooklyn, N. Y.

General Public Information Planning Committee
Chairman—Thomas H. Evans, Equitable Gas Co., Pittsburgh, Pa.

FINANCE COMMITTEE

Chairman—E. R. Acker, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y.

LABORATORIES MANAGING COMMITTEE

Chairman—N. B. Bertolette, The Hartford Gas Co., Hartford, Conn.

APPROVAL REQUIREMENTS COMMITTEE

Chairman—H. B. Noyes, Washington Gas Light Co., Washington, D. C.

Associated organizations

GAS APPLIANCE MANUFACTURERS ASSOCIATION
Pres.—Julius Klein, Caloric Appliance Corp., Philadelphia 7, Pa.
Man. Dir.—Harold Massey, 60 East 42nd St., New York 17, N. Y.

CANADIAN GAS ASSOCIATION
Pres.—F. R. Palin, Union Gas Co. of Canada, Ltd., Chatham, Ontario.
Gen. Mgr.—W. H. Dalton, 6 Hayden St., Toronto 5, Ontario.

FLORIDA-GEORGIA GAS ASSOCIATION
Chrmn.—Joseph Frink, Florida Power & Light Co., Miami, Fla.
Sec.-Tr.—L. A. Friederich, Tampa Gas Co., P.O. Box 2562, Tampa, Fla.

ILLINOIS PUBLIC UTILITIES ASSOCIATION
Sec.-Tr.—T. A. Schlink, Central Illinois Light Co., Peoria, Ill.

INDIANA GAS ASSOCIATION
Pres.—Lyman H. Bell, Hoosier Gas Corp., Vincennes, Ind.
Sec.-Tr.—R. A. Steele, Citizens Gas & Coke Utility, 2020 N. Meridian St., Indianapolis, Ind.

THE MARYLAND UTILITIES ASSOCIATION
Pres.—Robert W. Wilson, Potomac Electric Power Co., Washington, D. C.
Sec.—Robert L. Smith, Lexington Building, Baltimore, Maryland.

MICHIGAN GAS ASSOCIATION
Pres.—George E. Ludwig, Michigan Consolidated Gas Co., Muskegon, Mich.
Sec.-Tr.—M. G. Kendrick, Michigan Consolidated Gas Co., Ann Arbor, Mich.

MID-WEST GAS ASSOCIATION
Pres.—Peter C. DeHaan, Iowa Power and Light Co., Des Moines, Iowa.
Sec.-Tr.—Everett E. Baxter, Central Electric and Gas Co., Lincoln, Neb.

NATURAL GAS AND PETROLEUM ASSOCIATION OF CANADA
Pres.—L. B. Mehlenbacher, Haldimand Gas Syndicate, Cayuga, Ontario.
Sec. and Asst. Tr.—S. C. Hanna, United Gas & Fuel Co. of Hamilton, Hamilton, Ontario.

NEW ENGLAND GAS ASSOCIATION
Pres.—E. G. Rhodes, New Britain Gas Light Co., New Britain, Conn.
Man. Dir.—Clark Belden, 10 Newbury St., Boston 16, Mass.

NEW JERSEY GAS ASSOCIATION
Pres.—H. Whitcomb Nicolson, Public Service Electric & Gas Co., Newark, N. J.
Sec.-Tr.—Frank C. Pesveyc, Public Service Gas & Electric Co., Newark 1, N. J.

OKLAHOMA UTILITIES ASSOCIATION
Pres.—H. P. Hoheisel, Oklahoma Gas and Electric Co., Oklahoma City, Okla.
Sec.—Kate A. Niblack, 2415 Oklahoma Biltmore Hotel, Oklahoma City, Okla.

PACIFIC COAST GAS ASSOCIATION
Pres.—T. T. Arden, Robertshaw-Fulton Controls Co., Long Beach 5, Calif.
Man. Dir.—Robert D. Scott, 2 Pine St., San Francisco 11, Calif.

PENNSYLVANIA GAS ASSOCIATION
Pres.—C. G. Simpson, Philadelphia Gas Works Div., United Gas Improvement Co., Philadelphia, Pa.
Sec.—R. W. Uhler, Harrisburg Gas Div., United Gas Improvement Co., Harrisburg, Pa.

PENNSYLVANIA NATURAL GAS MEN'S ASSOCIATION
Pres.—Christy Payne Jr., Peoples Natural Gas Co., Pittsburgh, Pa.
Sec.-Tr.—P. L. Kesel, Carnegie Natural Gas Co., Pittsburgh, Pa.

ROCKY MOUNTAIN GAS ASSOCIATION
Pres.—Paul W. Young, C. A. Crosta, Inc., Denver, Colo.
Sec.-Tr.—H. P. Risley, Public Service Company of Colorado, Denver 2, Colo.
Field Sec.—Roy G. Munroe, Rm. 16, 1300 Glenarm St., Denver 2, Colo.

SOUTHEASTERN GAS ASSOCIATION
Pres.—Curtis M. Smith, Tennessee Gas Transmission Co., Houston, Texas.
Sec.-Tr.—Edward W. Ruggles, North Carolina State College, Raleigh, N. C.

SOUTHERN GAS ASSOCIATION
Pres.—R. A. Puryear, Jr., Alabama Gas Corp., Birmingham 3, Ala.
Man. Dir.—Robert R. Suttle, 1524 Life of America Building, Dallas 2, Texas.

WISCONSIN UTILITIES ASSOCIATION
Pres.—S. Lloyd Nemeyer, Milwaukee Gas Light Co., Milwaukee, Wis.
Exec.-Sec.—Dale F. Hansman, 135 West Wells St., Milwaukee 3, Wis.

American Gas Association

HEADQUARTERS, 420 LEXINGTON AVE., NEW YORK 17, N. Y.

A. G. A. LABORATORIES • 1032 East 62nd Street, Cleveland 3, Ohio • 1425 Grande Vista Avenue, Los Angeles, Calif.

WASHINGTON OFFICE • Room 804, Securities Bldg., 729-15th St., N.W., Washington 5, D. C.

◀ Officers ▶

President	C. H. ZACHRY	Southern Union Gas Co., Dallas, Texas
First Vice-President	A. W. CONOVER	Equitable Gas Co., Pittsburgh, Pa.
Second Vice-President	ROBERT W. OTTO	Laclede Gas Co., St. Louis, Mo.
Treasurer	VINCENT T. MILES	Long Island Lighting Co., Mineola, N. Y.
Assistant Treasurer	JAMES F. DALY	Long Island Lighting Co., Mineola, N. Y.
Managing Director	C. S. STACKPOLE	American Gas Association, New York, N. Y.
Secretary	HAROLD S. WALKER, JR.	American Gas Association, New York, N. Y.

◀ Directors ▶

JOHN B. BALMER	New York, N. Y.	WISTER H. LIGON	Nashville, Tenn.
PHILIP E. BECKMAN	San Francisco, Calif.	DONALD C. LUCE	Newark, N. J.
EVERETT J. BOOTHBY	Washington, D. C.	WALTER T. LUCKING	Phoenix, Ariz.
F. D. CAMPBELL	Cambridge, Mass.	CHESTER L. MAY	Dallas, Texas
ORVILLE S. CARPENTER	Shreveport, La.	DEAN H. MITCHELL	Hammond, Ind.
MARVIN CHANDLER	Aurora, Ill.	ED PARKES	Shreveport, La.
CARL E. CLOUD	Little Rock, Ark.	F. T. PARKS	Denver, Colo.
STUART COOPER	Wilmington, Del.	JOHN C. PARROTT	Roanoke, Va.
R. E. CRAWFORD	St. Peter, Minn.	J. C. PETERSON	Pittsburgh, Pa.
C. H. GUEFFROY	Portland, Ore.	C. P. RATHER	Birmingham, Ala.
LYLE C. HARVEY	Syracuse, N. Y.	W. F. ROCKWELL, JR.	Pittsburgh, Pa.
J. J. HEDRICK	Chicago, Ill.	EDWARD H. SMOKER	Philadelphia, Pa.
J. E. HEYKE	Brooklyn, N. Y.	E. H. TOLLEFSON	Clarksburg, W. Va.
ROBERT A. HORNBY	San Francisco, Calif.	J. THEODORE WOLFE	Baltimore, Md.
D. E. KARN	Jackson, Mich.	DENNIS K. YORATH	Edmonton, Canada
JULIUS KLEIN	Philadelphia, Pa.		

◀ Section Chairmen ▶

Accounting Section	W. D. SWEETMAN	The Peoples Gas Light & Coke Co., Chicago, Ill.
General Management Section	LESLIE A. BRANDT	The Peoples Gas Light & Coke Co., Chicago, Ill.
Industrial and Commercial Gas Section	J. ROBERT DELANEY	The Cincinnati Gas & Electric Co., Cincinnati, Ohio
Operating Section	GROVE LAWRENCE	Southern California Gas Co., Los Angeles, Calif.
Residential Gas Section	W. D. WILLIAMS	New Jersey Natural Gas Co., Asbury Park, N. J.

◀ Association Staff ▶

Managing Director	C. S. STACKPOLE
Assistant Managing Director	JOHN W. WEST, JR.
Assistant Managing Director	B. A. McCANDLESS
Director, A. G. A. Laboratories	FRANK E. HODGDON
Secretary and Convention Manager	HAROLD S. WALKER, JR.
Controller	ROBERT J. CUTTING
Director of PAR Plan	ALLEN D. SCHRODT
Director, Promotion and Advertising	S. F. WIKSTROM
Advertising Manager	NORVAL D. JENNINGS
Promotion Manager	CHARLES R. BOWEN
Manager, New Freedom Bureau	KENNETH F. MULDOON
Commercial Promotion Manager	HAYES S. WALTER
Manager, Hollywood Bureau	H. D. NICHOLSON
Director, Research	THOMAS LEE ROBEY
Research Consultant	DR. N. K. CHANEY
Director, Public Information	JAMES M. BEALL
Secretary, Accounting Section	THOMAS J. SHANLEY
Secretary, General Management Section	VAUGHAN O'BRIEN
Secretary, Industrial and Commercial Gas Section	MAHLON A. COMAS
Secretary, Operating Section	J. STANFORD SETCHELL
Secretary, Residential Gas Section	F. W. WILLIAMS
Home Service Counsellor	JESSIE McQUEEN
Director, Bureau of Statistics	DANIEL PARSONS
Utilization Engineer	C. GEORGE SEGELI
Safety Consultant	RAUEL N. PAPIN
Manager, Pacific Coast Branch Laboratories (Los Angeles, Calif.)	W. H. VOGAN
Manager, Washington Office	CURTIS MORRIS

PRINTED IN U. S. A.